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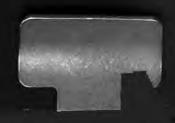
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THE ENGINEERING WORKS

OF THE

KISTNA DELTA.

VOLUME II.

ENGINEERING WORKS

OF THE

KISTNA DELTA:

A DESCRIPTIVE AND HISTORICAL ACCOUNT.

COMPILED FOR THE MADRAS GOVERNMENT

BY

GEORGE T. WALCH, M. INST.C. E., Chief Engineer for Irrigation, Madras (Retired).

IN TWO VOLUMES.

VOLUME II.

Madras:

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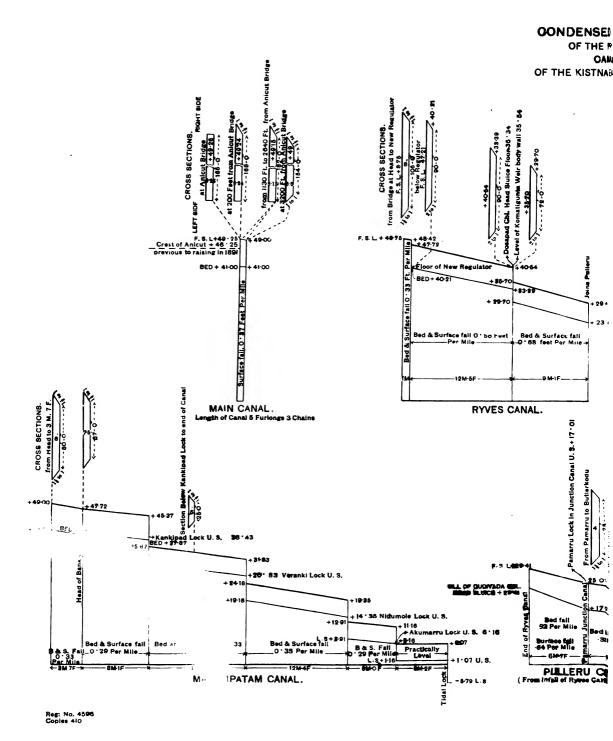
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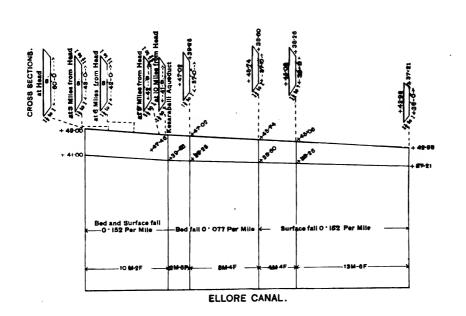
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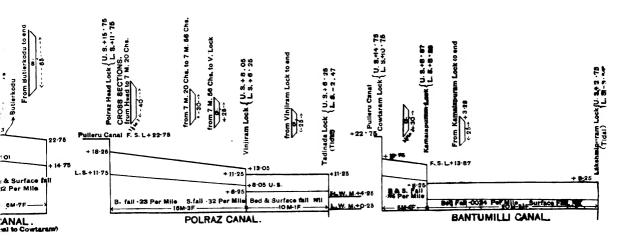
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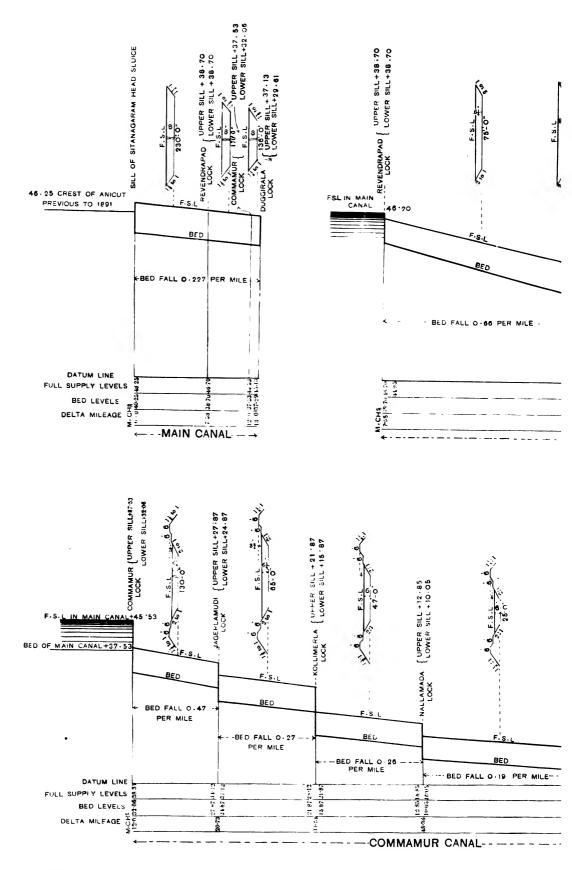
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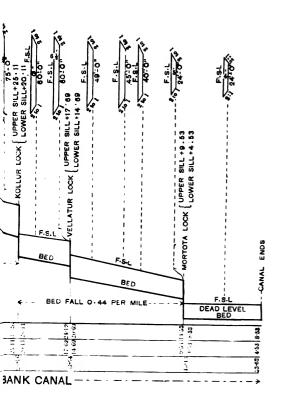




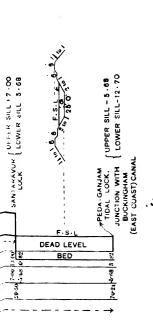
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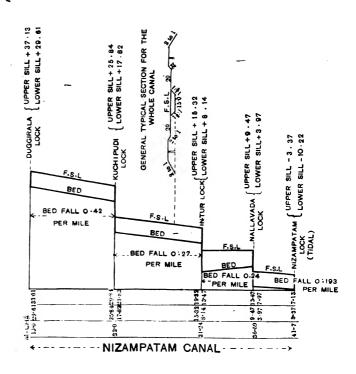


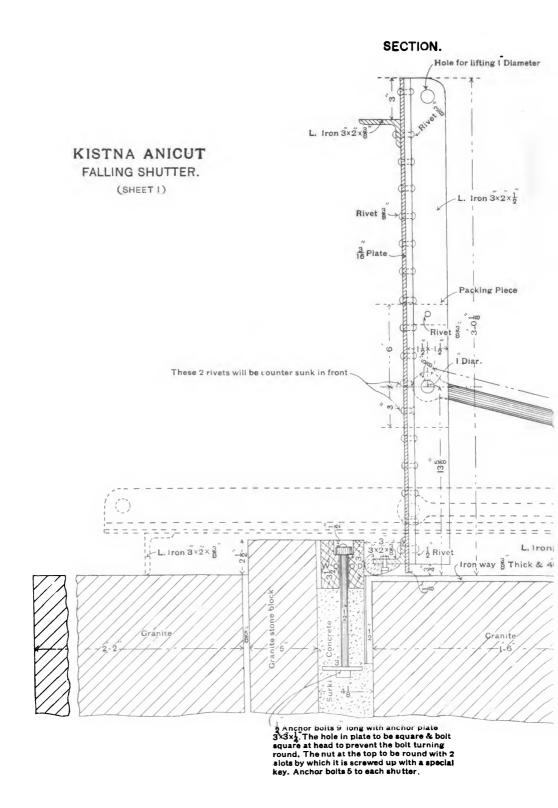
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CONDENSED SECTIONS OF THE PRINCIPAL CANALS OF THE KISTNA WESTERN DELTA.







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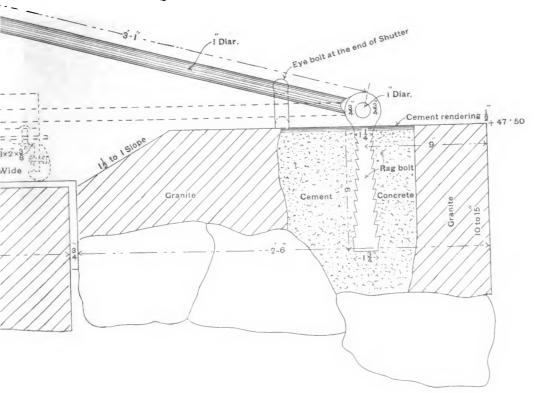
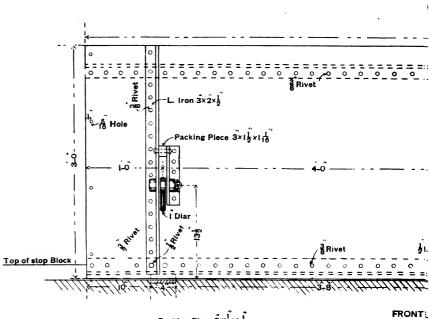
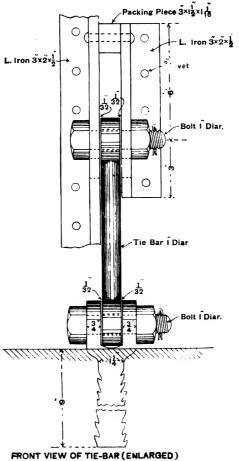


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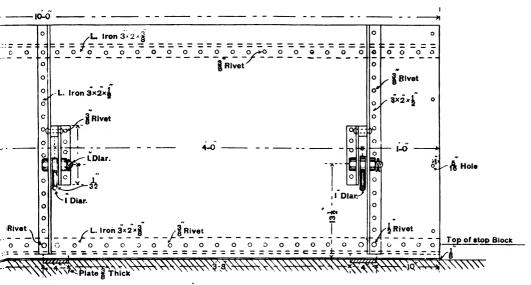


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SECTION THROUGH THE SOLID CAST IRON SHOE. (ENLARGED)

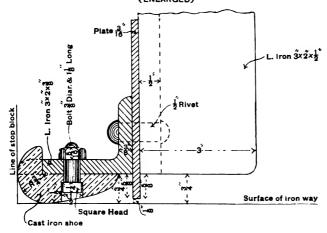
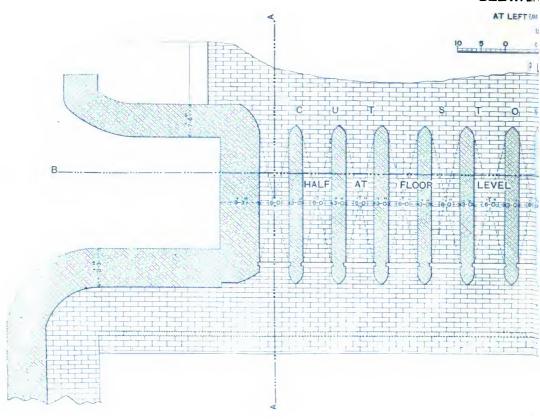
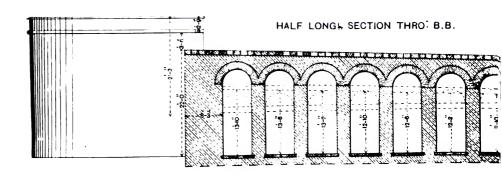
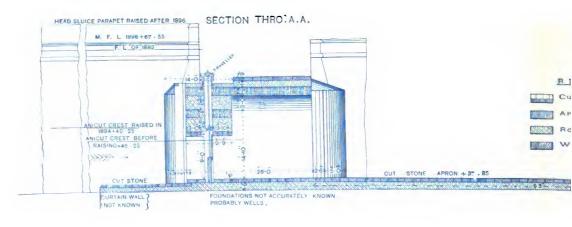


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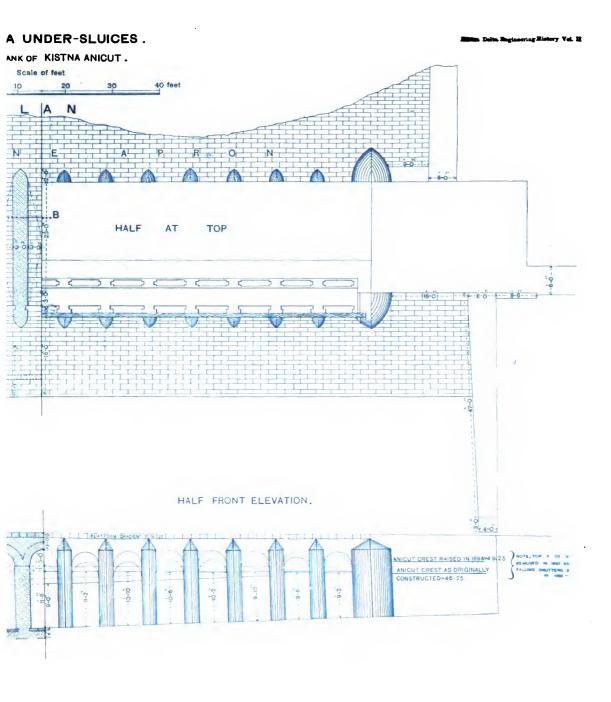
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FERENCE

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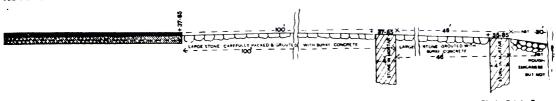
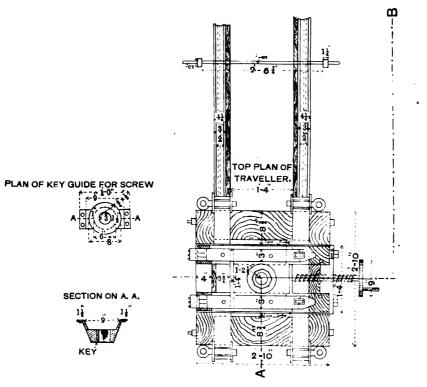
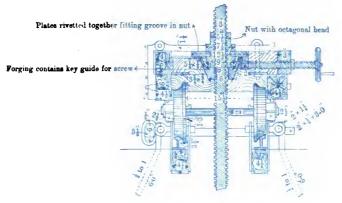


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SECTION THRO A. B

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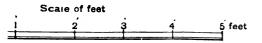


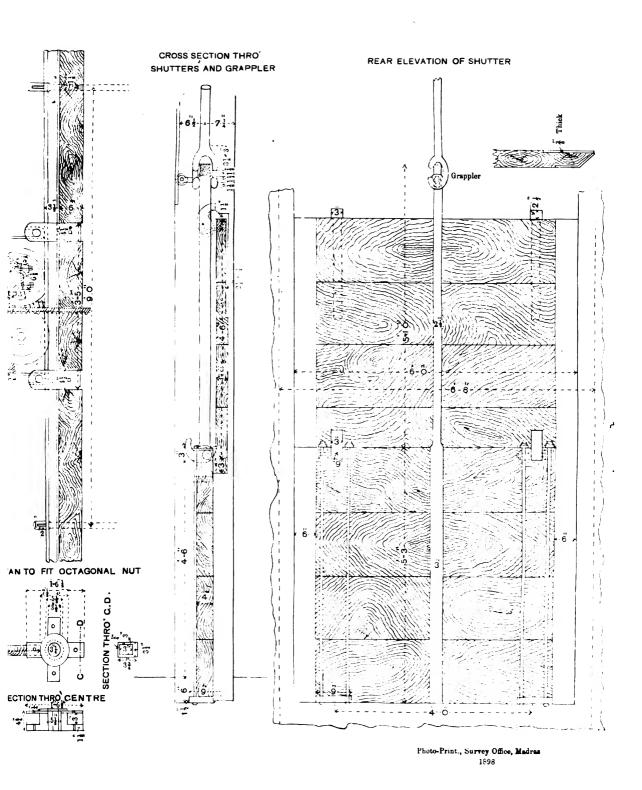
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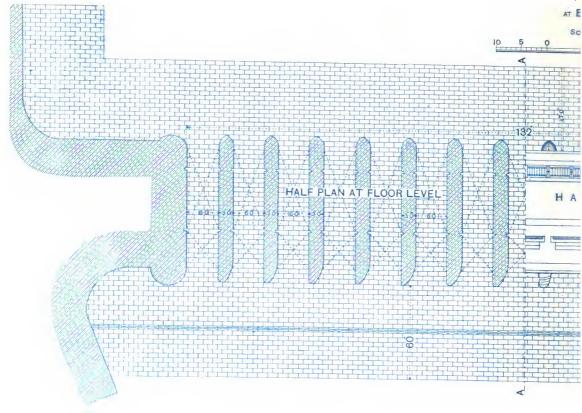
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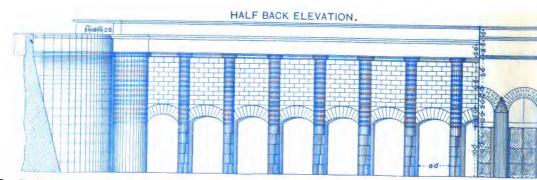




PLAN OF HEAD SL

OF KISTNA



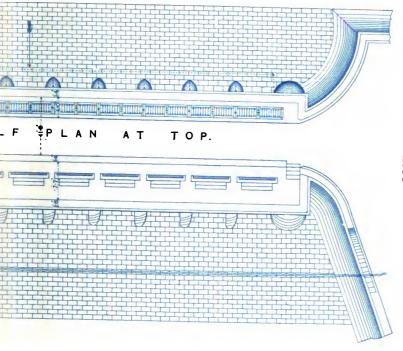


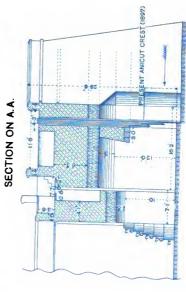
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JICE TO MAIN CANAL ASTERN DELTA

EZWADA.

e of Feet 10 20 30 Feet





HALF FRONT ELEVATION.

Rough-Stone in Chunam.

Arch-work Brick in Chunam.

REFERENCE

Cutstone work.

Wood-work.

Note. Accurate details of Foundations not on record, but the work is founded on Brick wells sunk in sand.

The details of thickness of wings and abutments not known.

The work was built in 1853-55. The second row of shutters (at the reary were added in 1867,

The acress builters now in use, were added in 1870-80

The details of the screw builters

The details of the screw shutters now in use are shewn on separate drawing.

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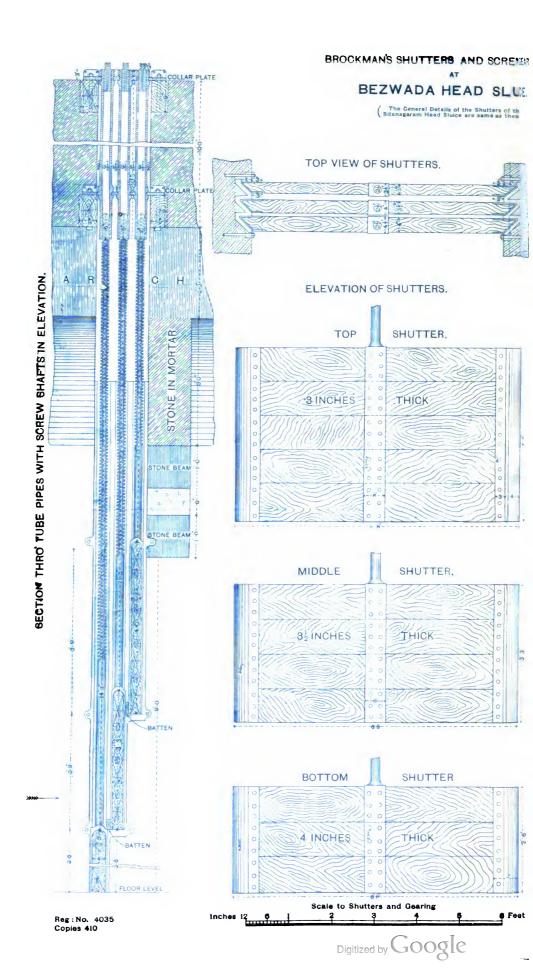


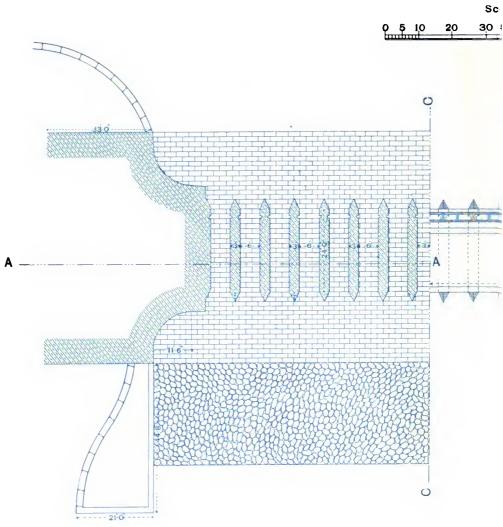
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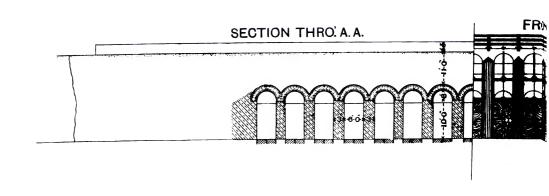
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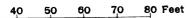
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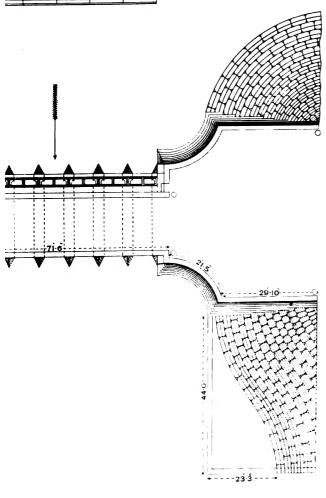
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VESTERN DELTA

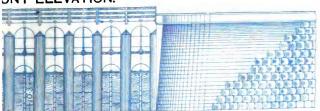
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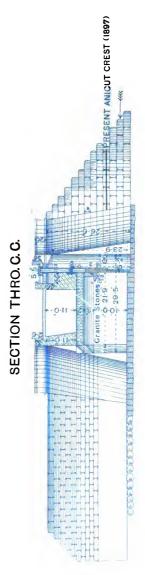
ile of Feet





ONT ELEVATION.





REFERENCE.

Rough Stone in Mortar

Arch work (Brick in Mortar)

Cut stone work

Rough Stone

Wood work

Note. Details of foundations not on record.

Do of thickness of wings and abutments not known.

of screw shutters are similar to those at Bezwada head sluice.

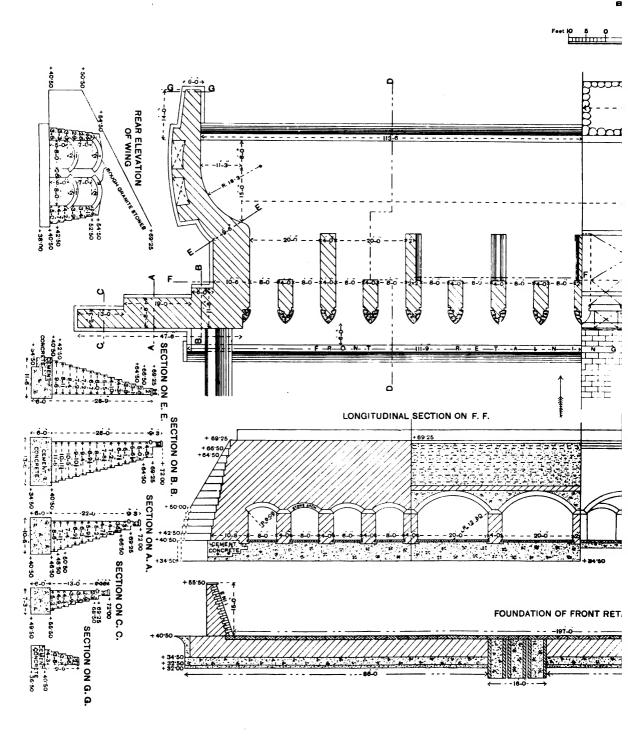
The screw shutters now in use, were added in 1879-80.

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1897

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KISTNA



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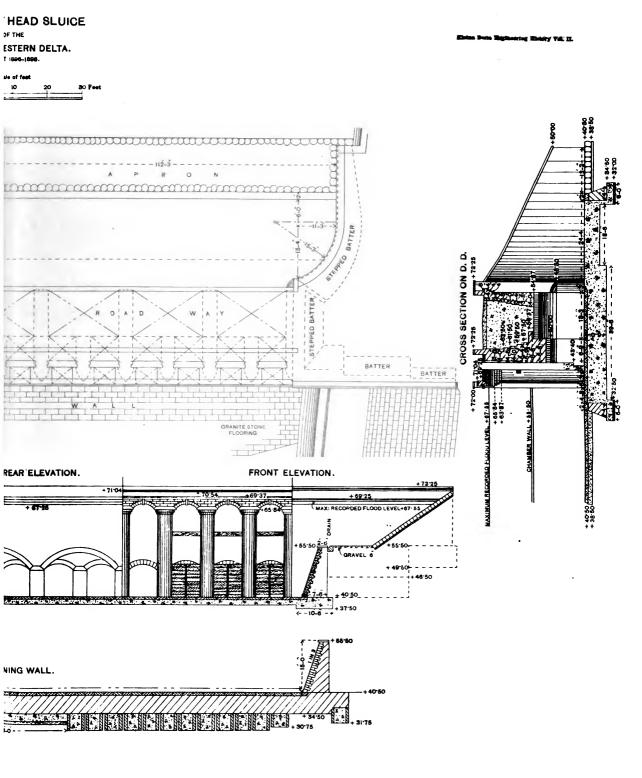
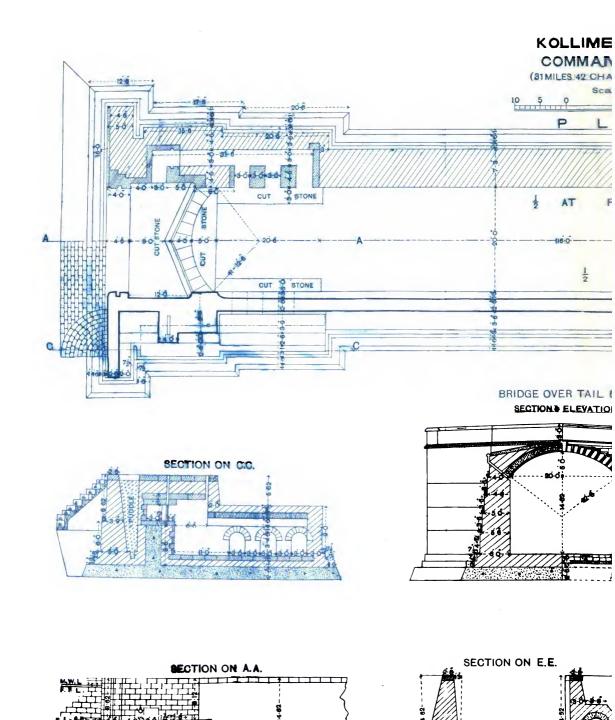
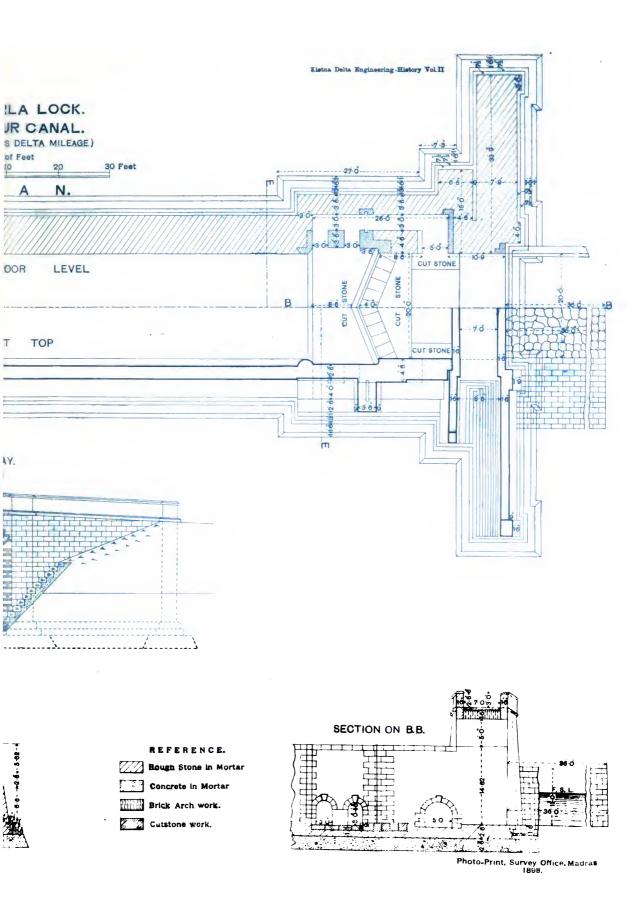


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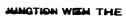


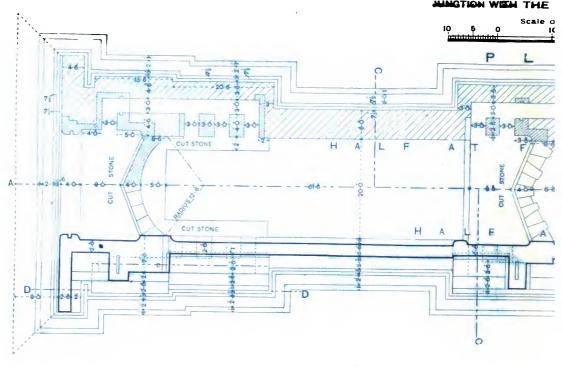
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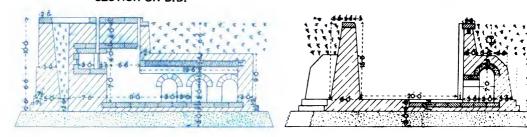
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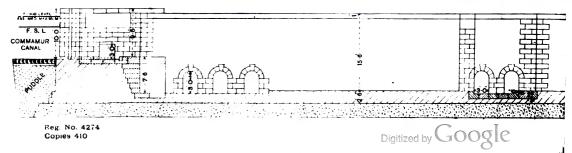
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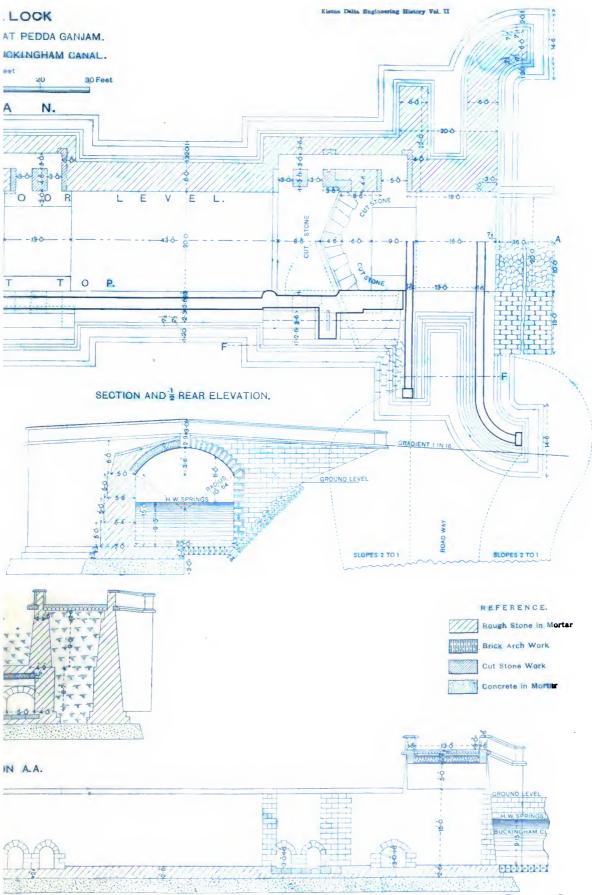
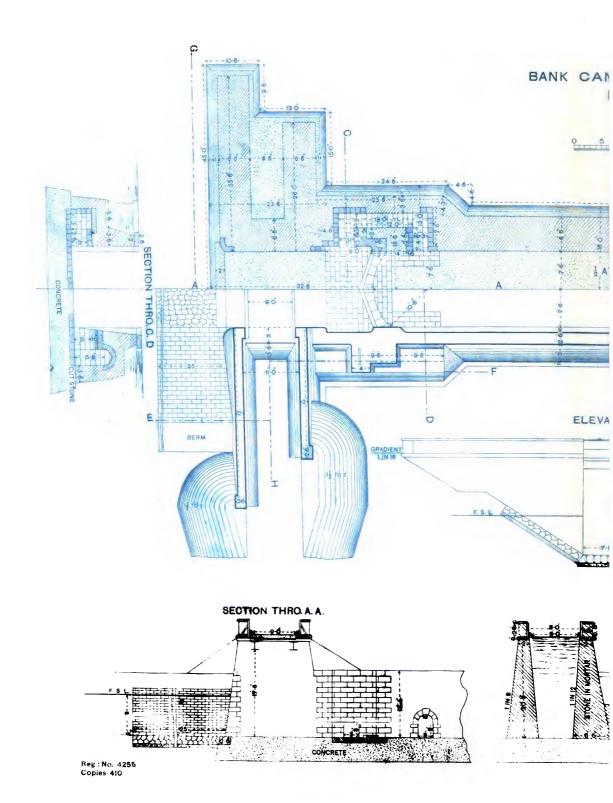


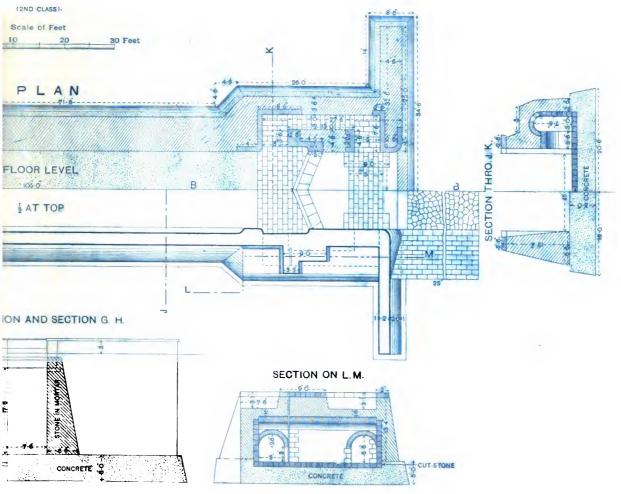
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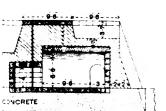


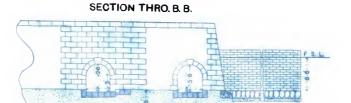
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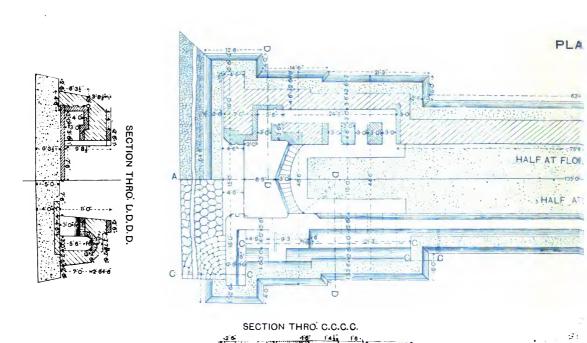




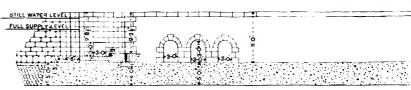
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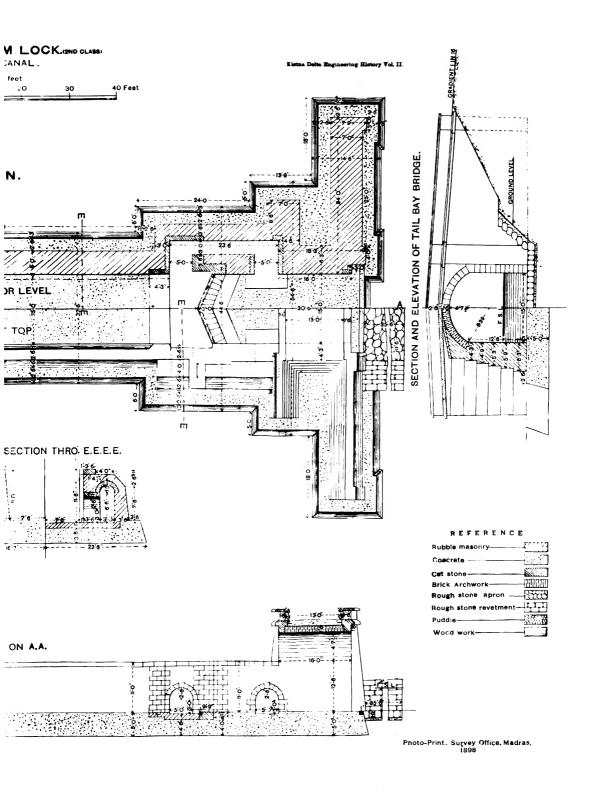




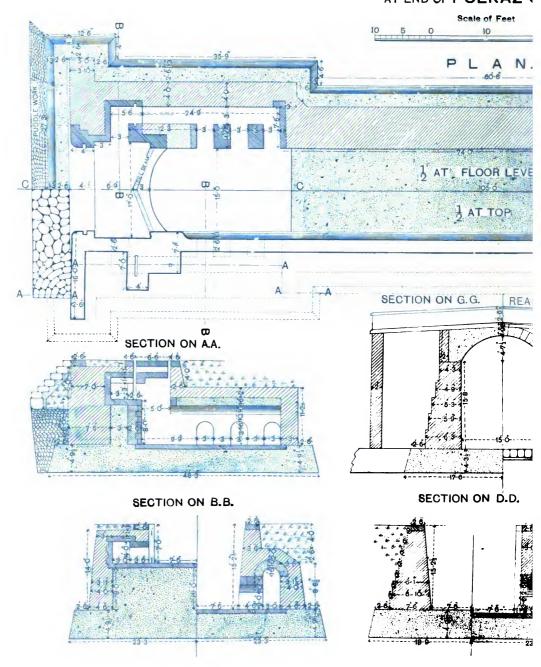
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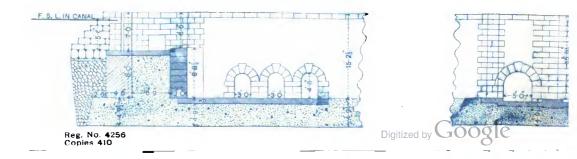
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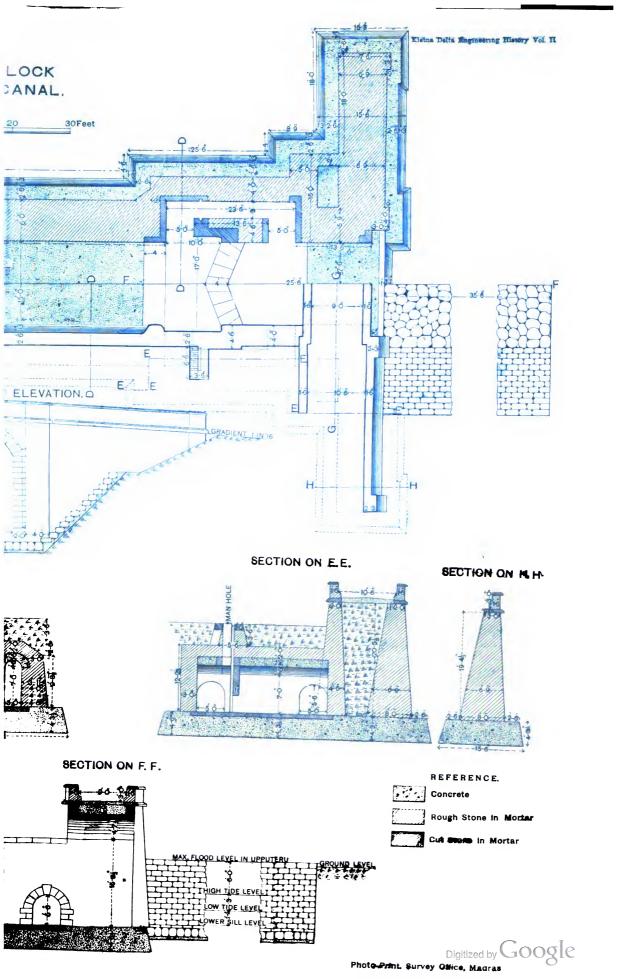


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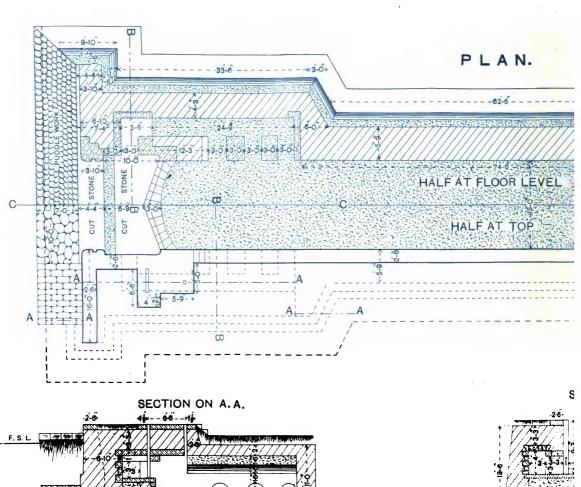


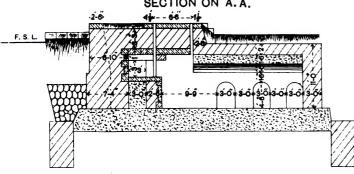


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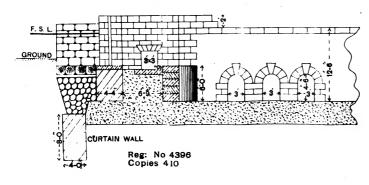
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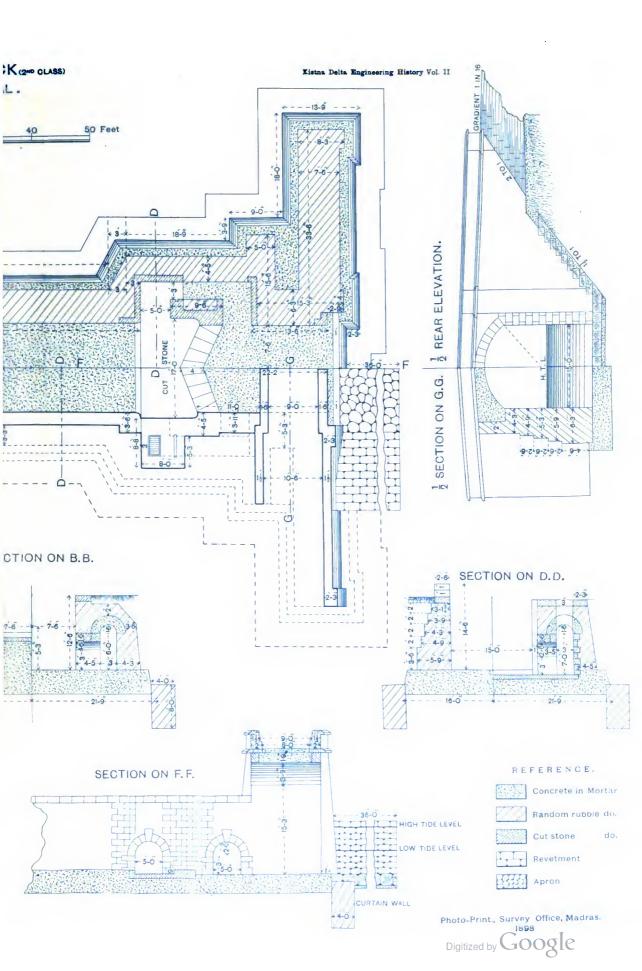






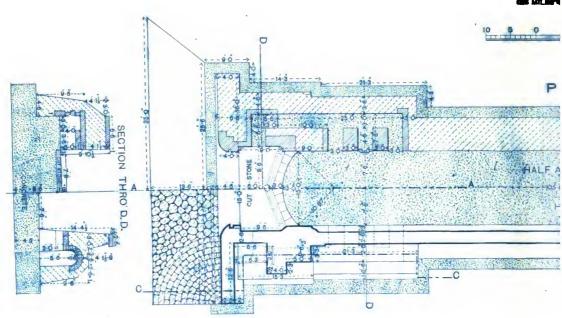
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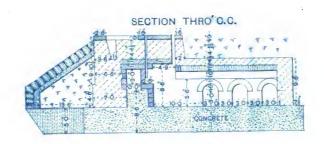


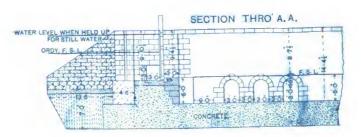


MORT

BANK CANA







SEC1

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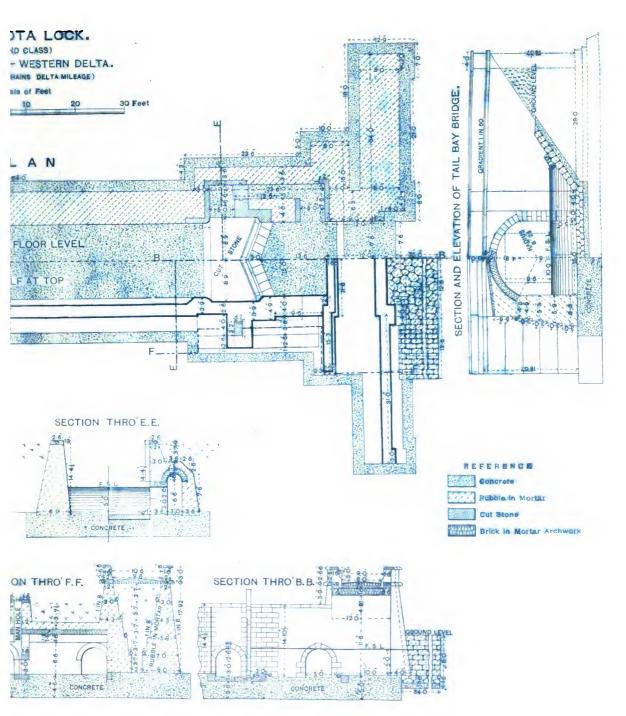
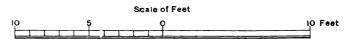
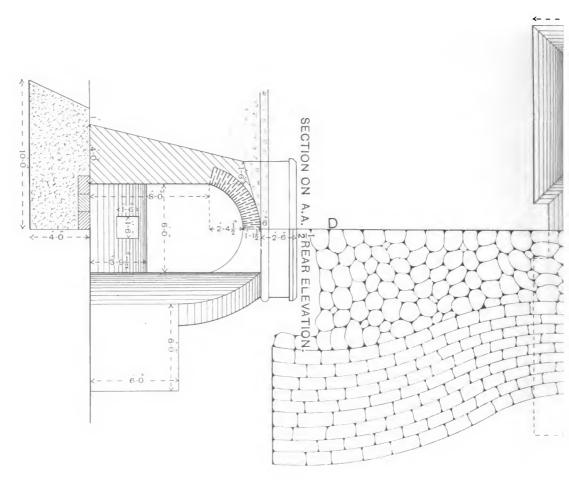


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VINJIRAM LOCK-WEIR. POLRAZ CANAL.





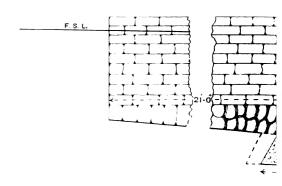








Brick Archwork



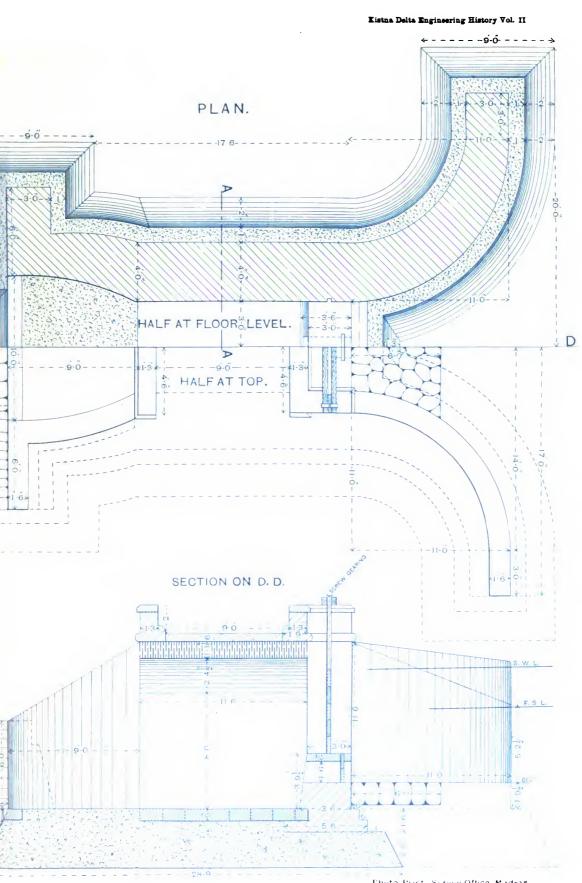
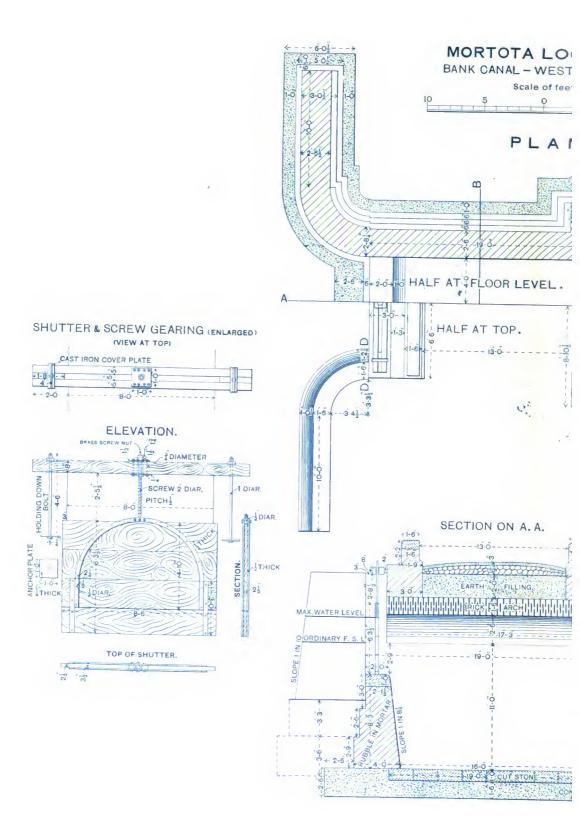


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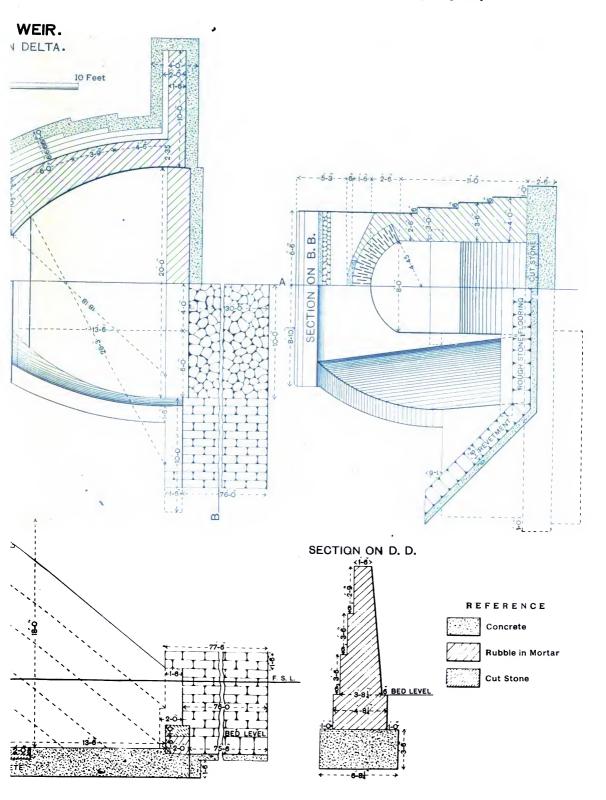
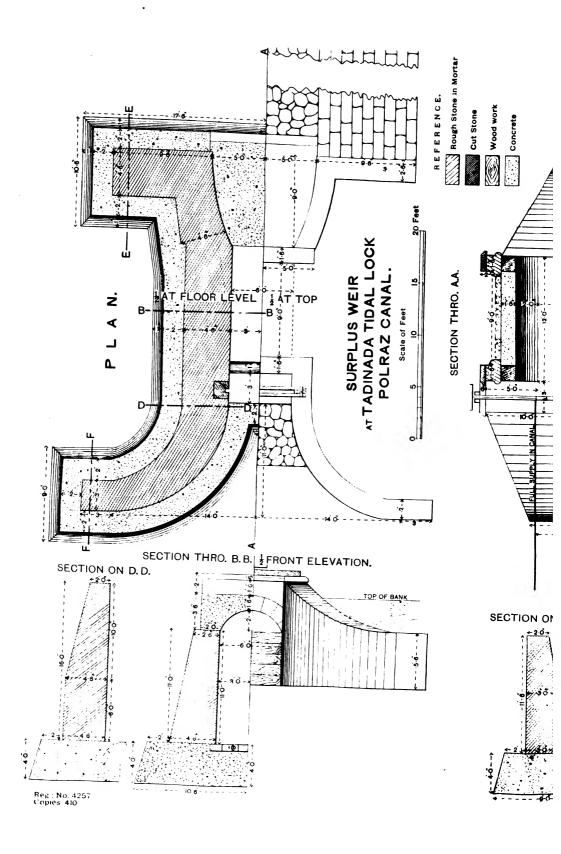


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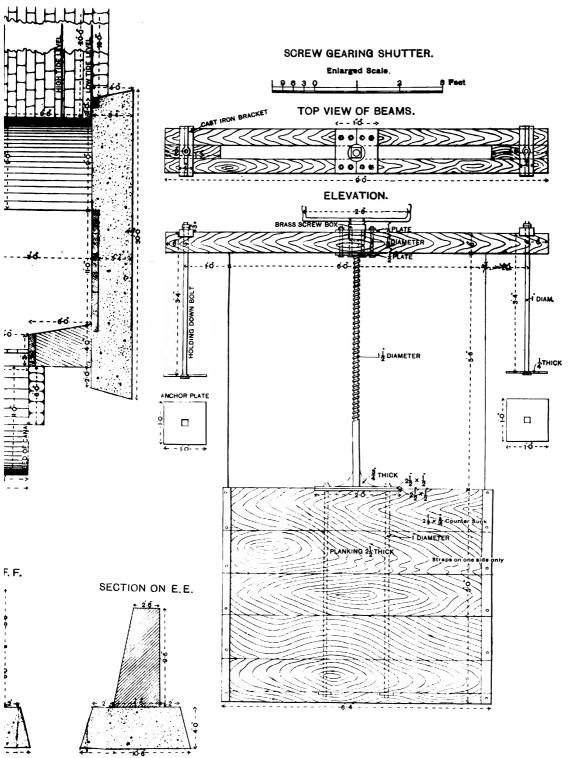
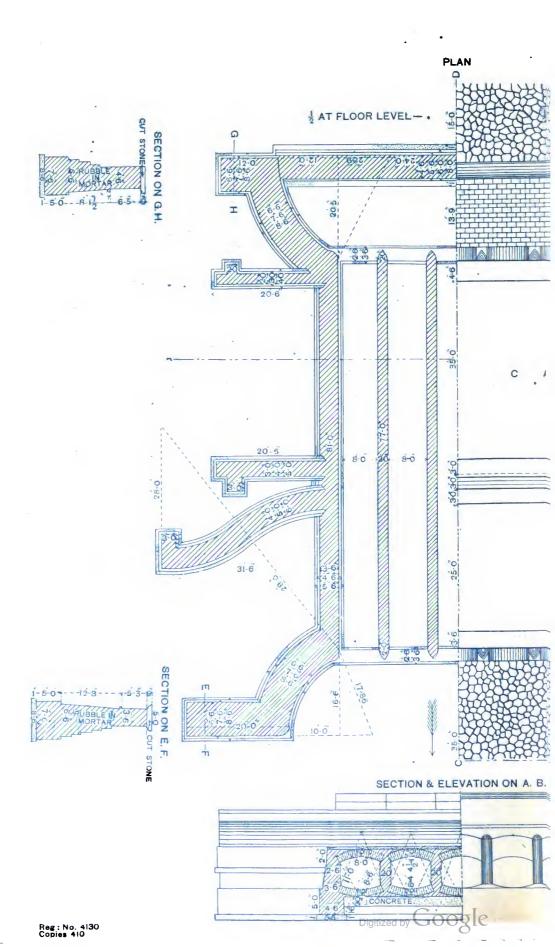
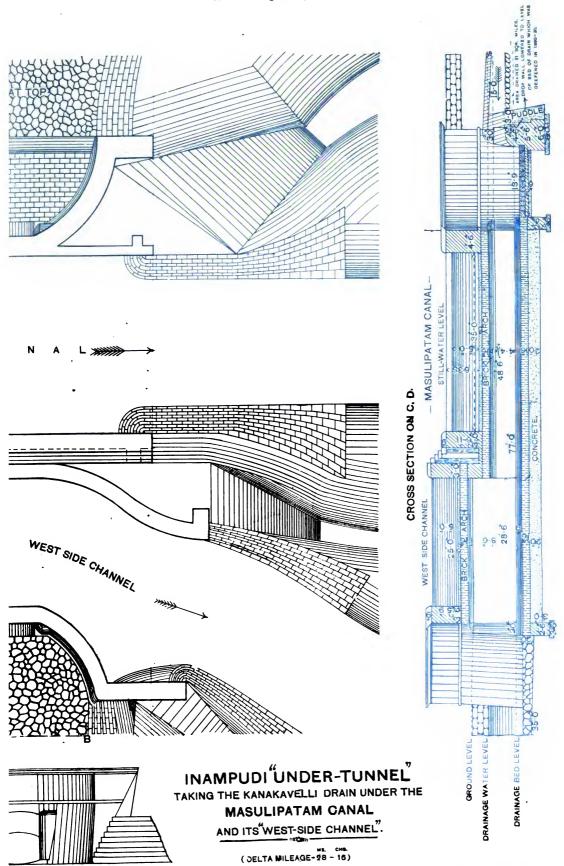
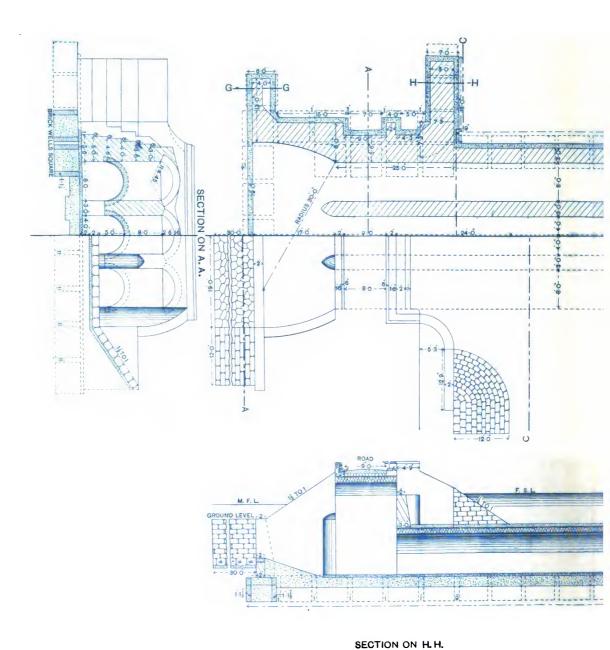


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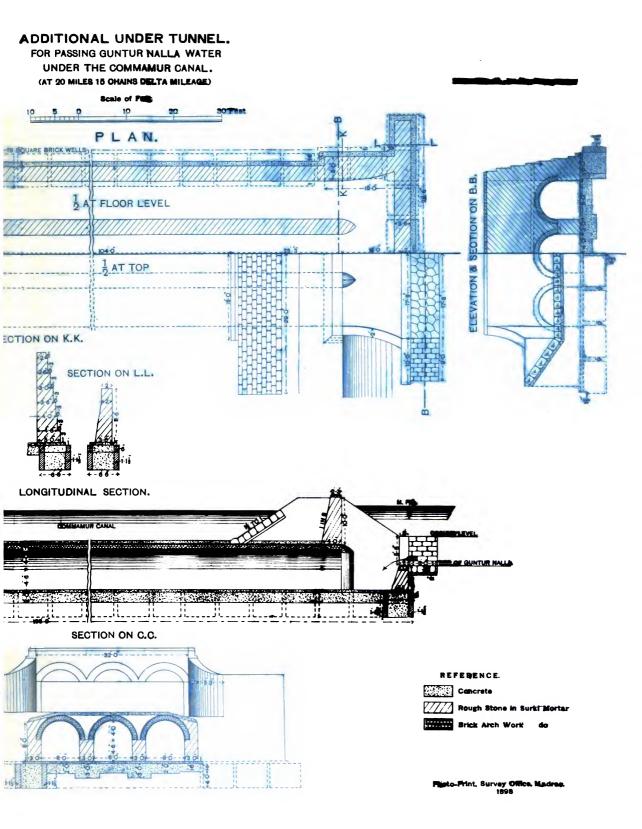


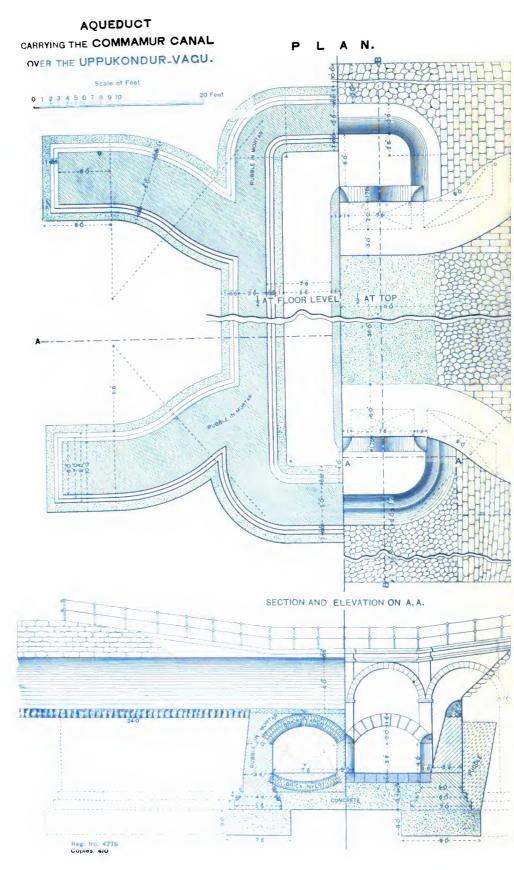




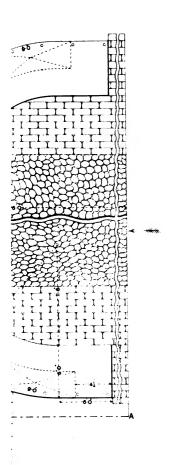
SECTION ON G. G.

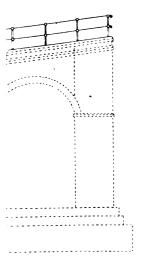
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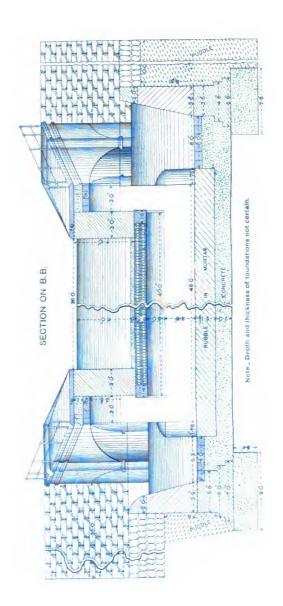
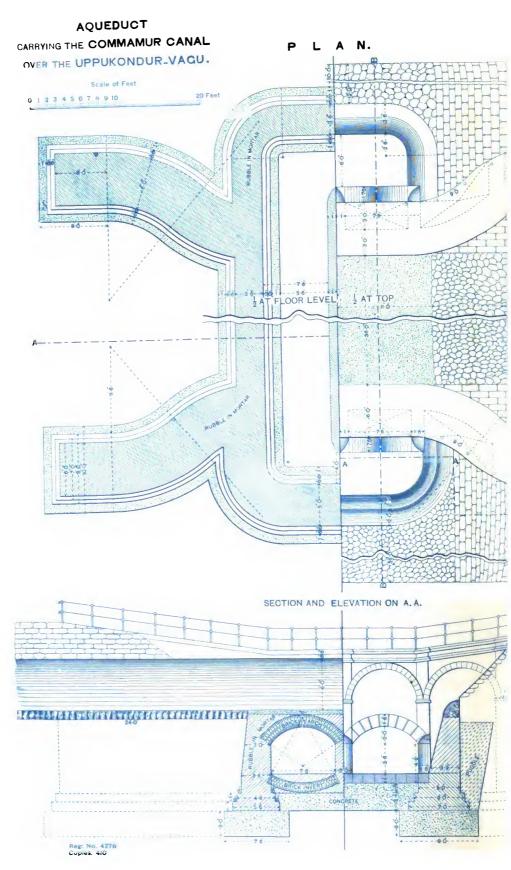
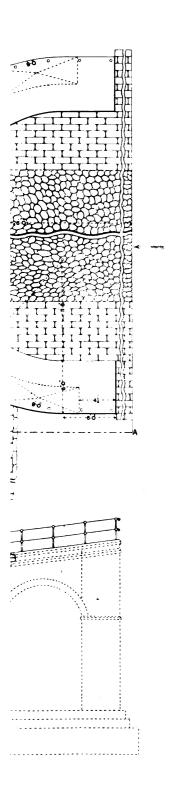


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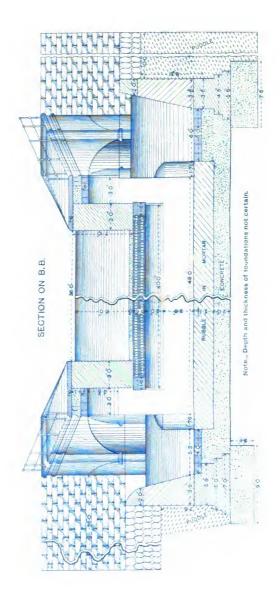


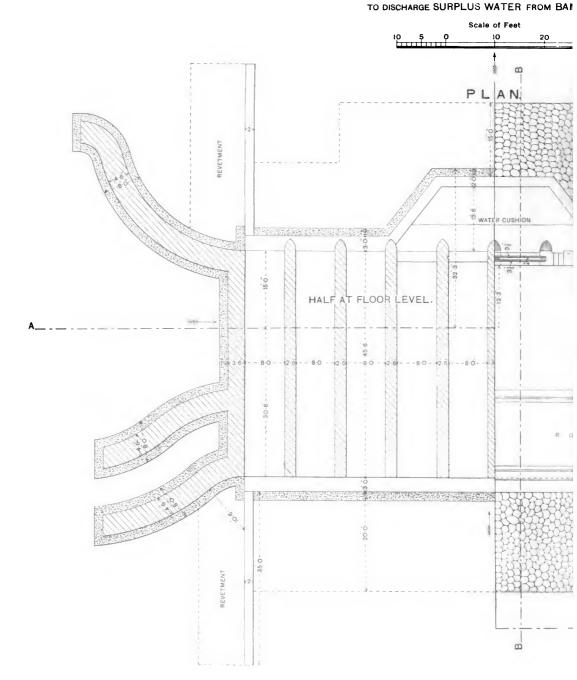
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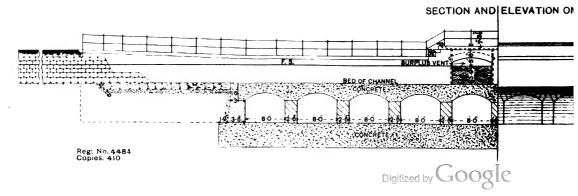
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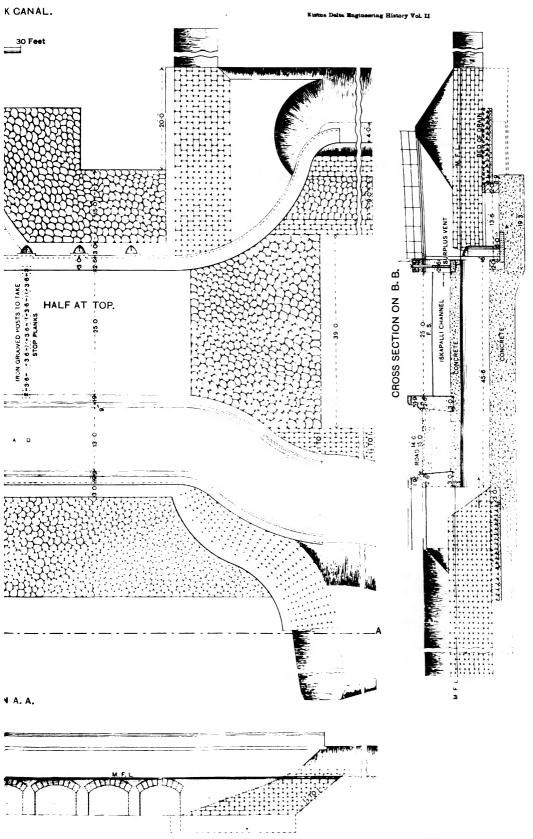
AQUEDUCT

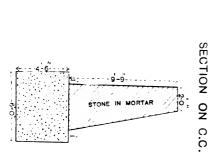
CARRYING ISKAPALLI IRRIGATION CHANNI
OVER THE BHATTIPROLE DRAIN

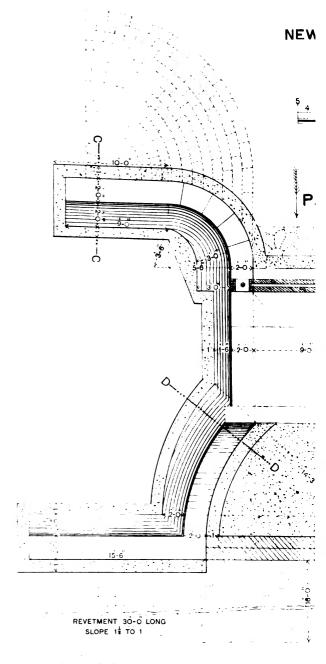
WITH TWO VENTS IN SIDE-WALL



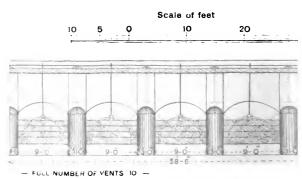








HALF FRONT ELEVATION.



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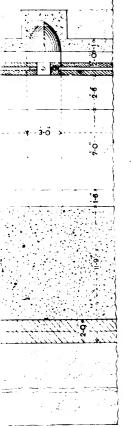
NALLAMADA SURPLUS SLUICES.

IN LEFT BANK OF COMMAMUR CANAL. (DELTA MILEAGE 41 MILES 3 CHAINS)

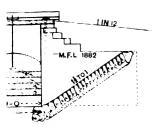


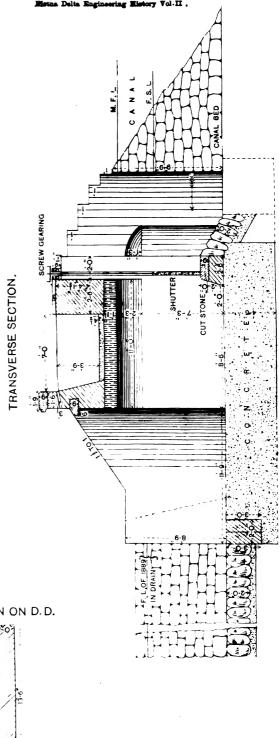
RT PLAN.



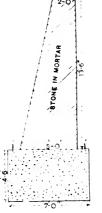


feet





SECTION ON D.D.



HEAD SLUICE OF

EASTERN DEI

RIGHT BANK OF MASU

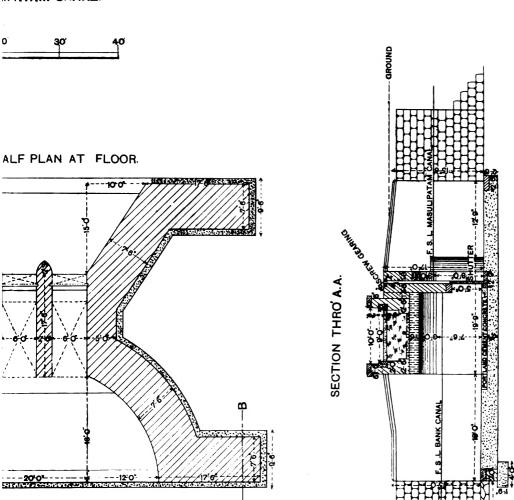
Scale of fee HALF PLAN AT TOP. FRONT ELEVATION. ō HALF REAR ELEVATION.

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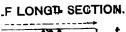
ANK CANAL

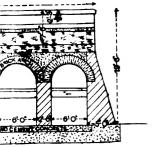
ra. .IPA**TAM CANAL.**

Kistna Dalta Engineering History Vol II

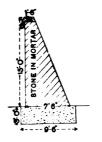


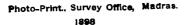
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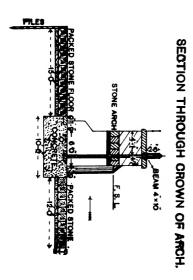
SECTION THRO B.B.

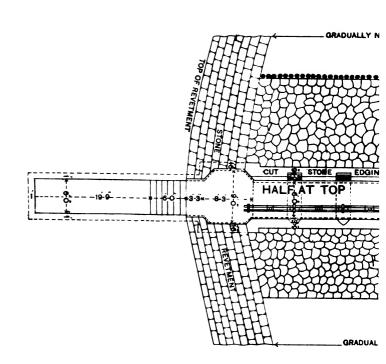




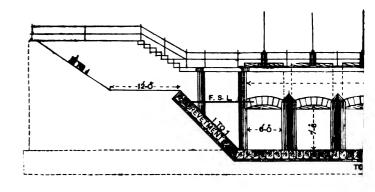
NEW







FRONT ELEVATION, (SHUTTERS LIFTED)



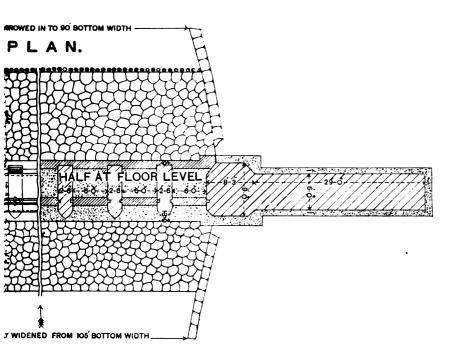
Charles 600

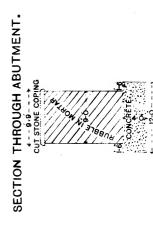
REGULATOR

YVES CANAL.

Scale of feet







BACK ELEVATION.
(SHUTTERS DOWN)

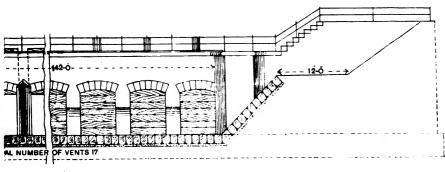
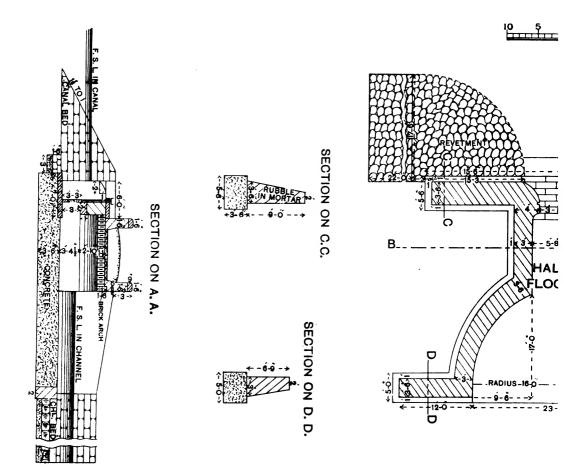
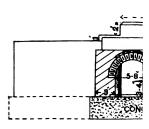


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TO ISKA BANK



SECTI



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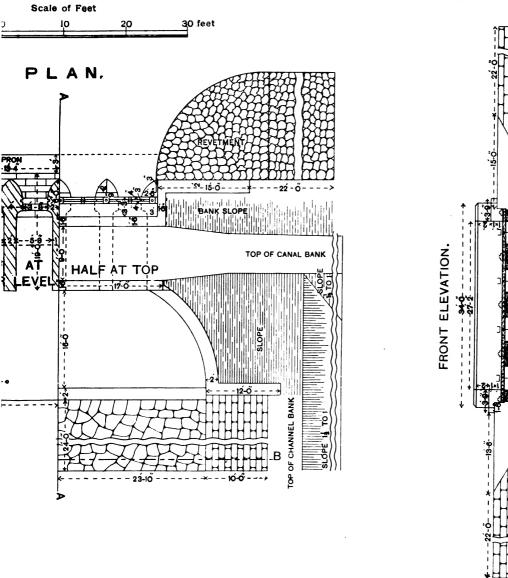
HEAD SLUICE

ALLI IRRIGATION CHANNEL.

ANAL-WESTERN DELTA.

TO BE IRRIGATED, 15,000 ACRES)

Kistna Delta Engineering History Vol. II



IN AND ELEVATION ON B.B.

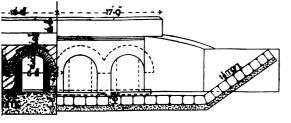


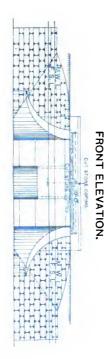
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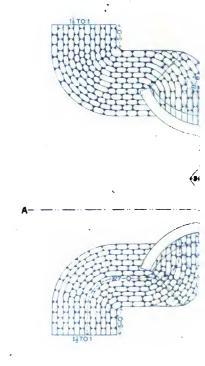
PLAN
AT FLOOR LEVEL

REAR BATTER I IN 6.

ONLY

BED OF CANAL
TOE WALL 2' THICK





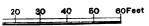
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ID SLUICE

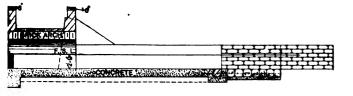
SIDE & VARAHAPURAM"
FION CHANNELS.
FAL-WESTERN DELTA.
IATEO-6,000 AGRES, EACH CHANNEL

Kistna Delta Engineering History Vol. II

Scale of Feet



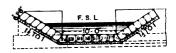
TION ON A.A.

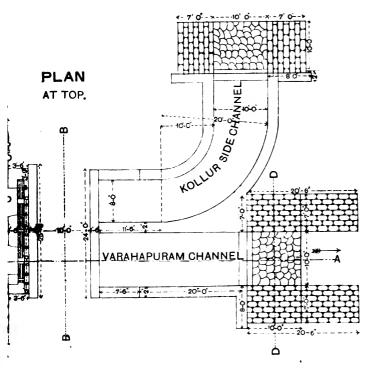


CROSS SECTION ON C.C.



CROSS SECTION ON D.D.





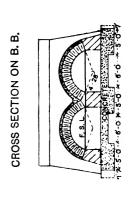
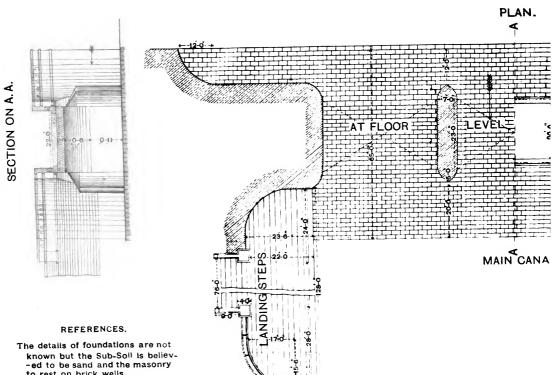


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BRIDGE OVER MAIN C IMMEDIATELY BELOW

> BEZ' Scale 20 10

> > RE#



known but the Sub-Soil is believ-ed to be sand and the masonry to rest on brick wells.

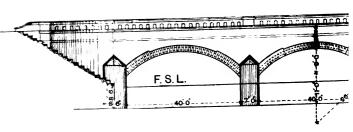
The work was built in 1853-55.

The roadway was raised and new parapets built in 1884.

Thickness of wings and abutments not known.

Rough stone in mortar Brick in mortar Brick Arch-work Roughly dressed stone work

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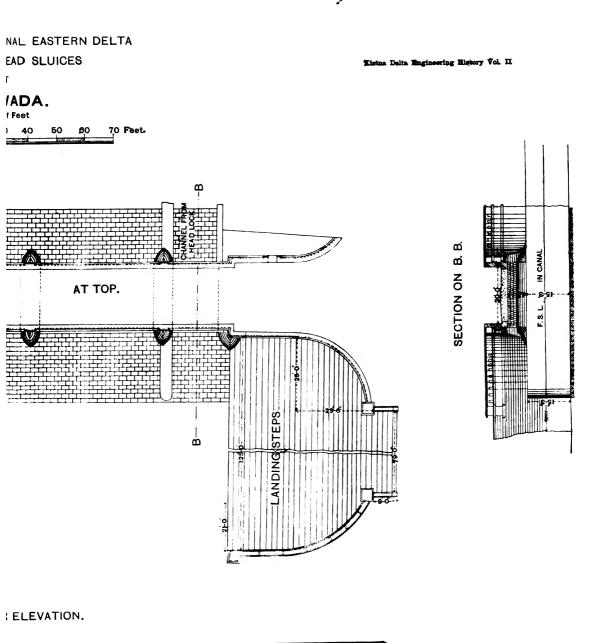


Photo-Print Survey Office, Madras.

BRIDGE OVER RYVES CAP BETWEEN HEAD & NEW REGULA PLAN. AT TOP HALF ELEVATION GEOTION ON C.D.

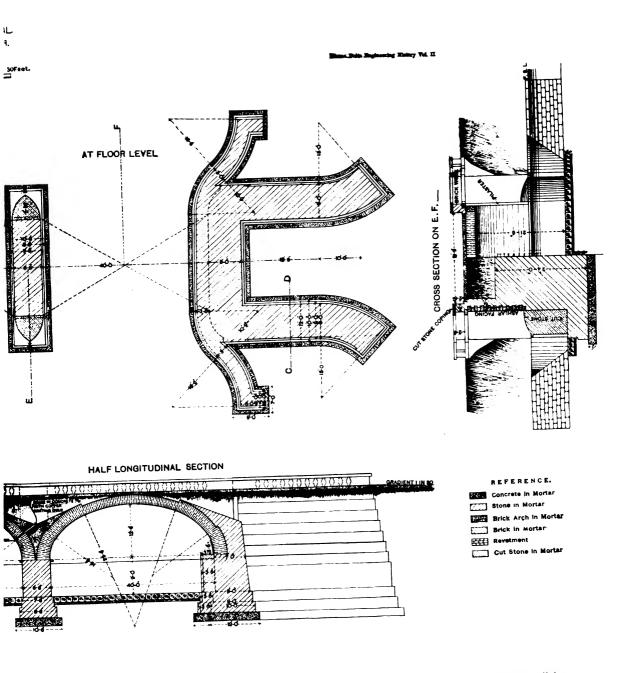
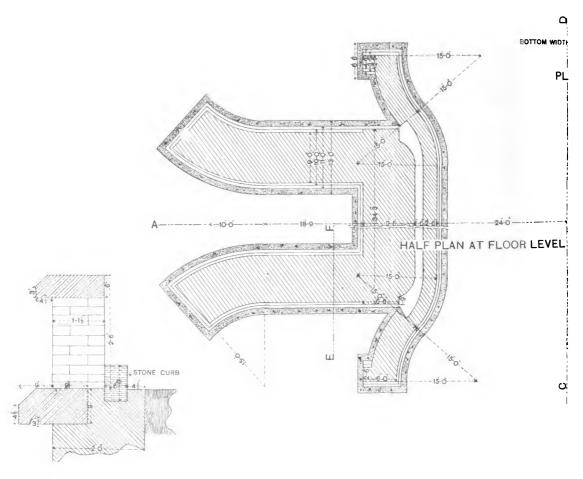


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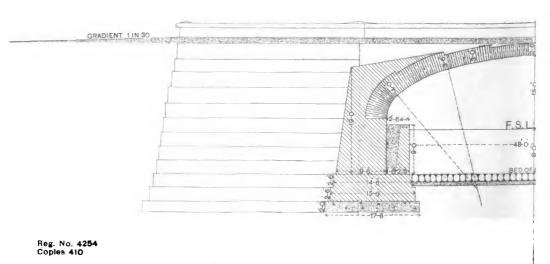
BRIDGE OVER E

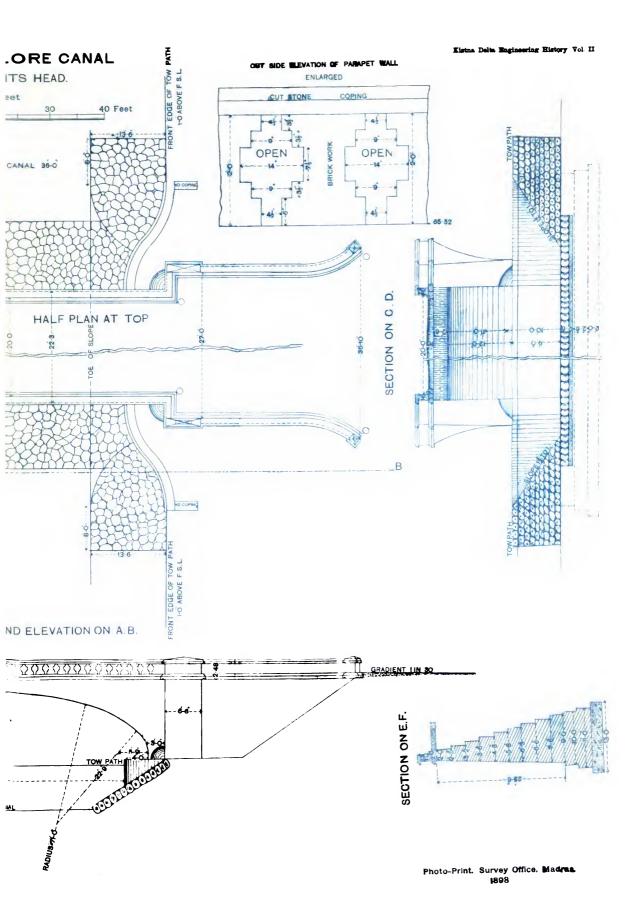
Scale 6

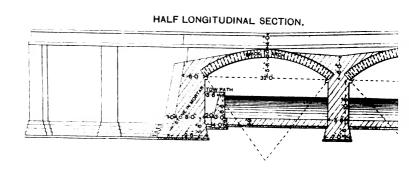


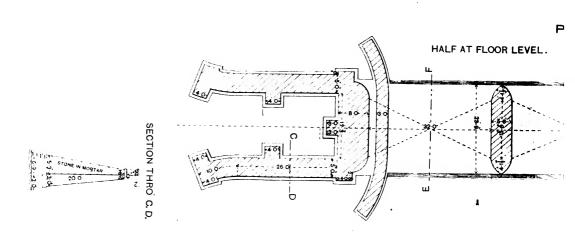
ENLARGED SECTION OF PARAPET.

LONGITUDINAL SECTION









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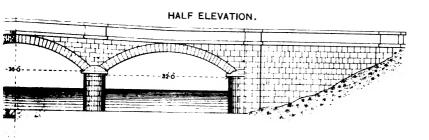
LUR BRIDGE.

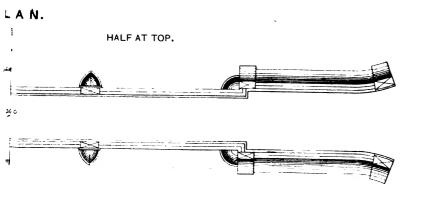
AMUR CANAL.
GE 15 MILES 9 CHAINS)

ale of feat

20 30 40 Feet

Listna Dulta Engineering History Vol. II





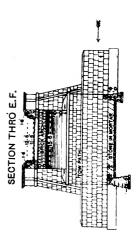
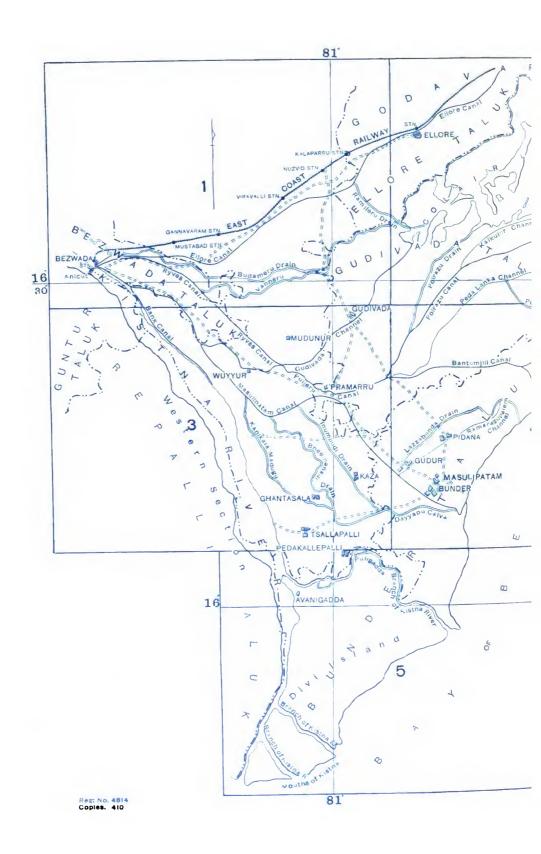


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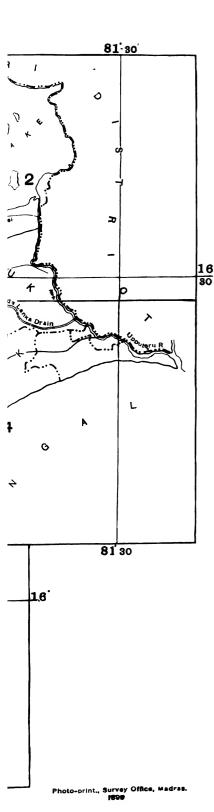


PLATE 36 KEY MAP

KISTNA DELTA

EASTERN SECTION.

stle of Miles

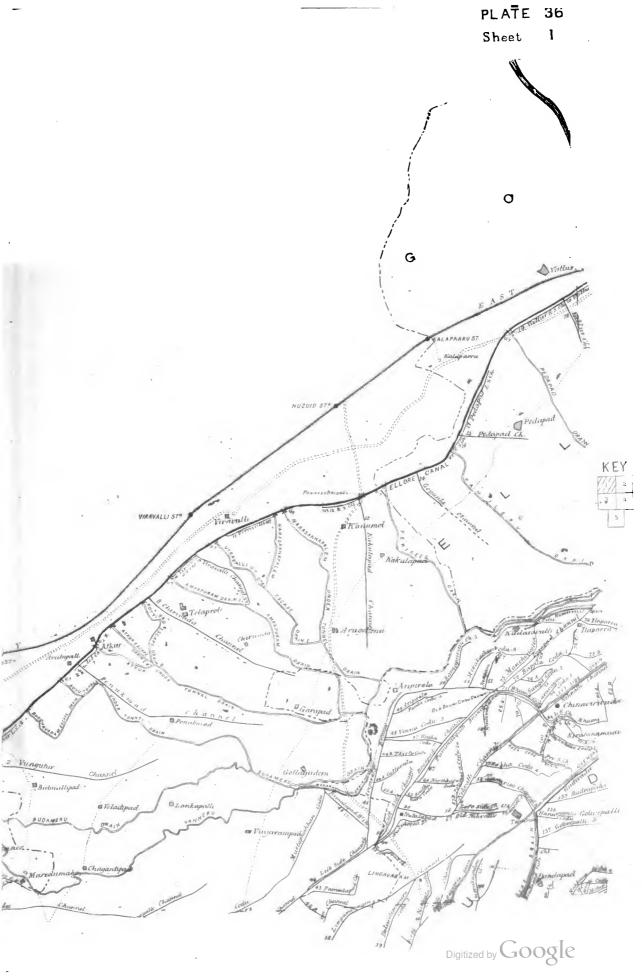
0 1 2 8 4 5 Miles

SKETCH MAP

of the

KISTNA DELTA

Eastern Section. SCALE OF MILES __ Reference _ Village Site _ Main Canal _ Monnet _ Proposed Channel ____ Drain _ Proposed Drawn_ Embankment_ Trunk Road __ Village Road _ Lock _ Bridge_ Under Tunnel ___ Escape __ Wharves declared under canal Act_BEZWADA USTABAD STY Osararagudem



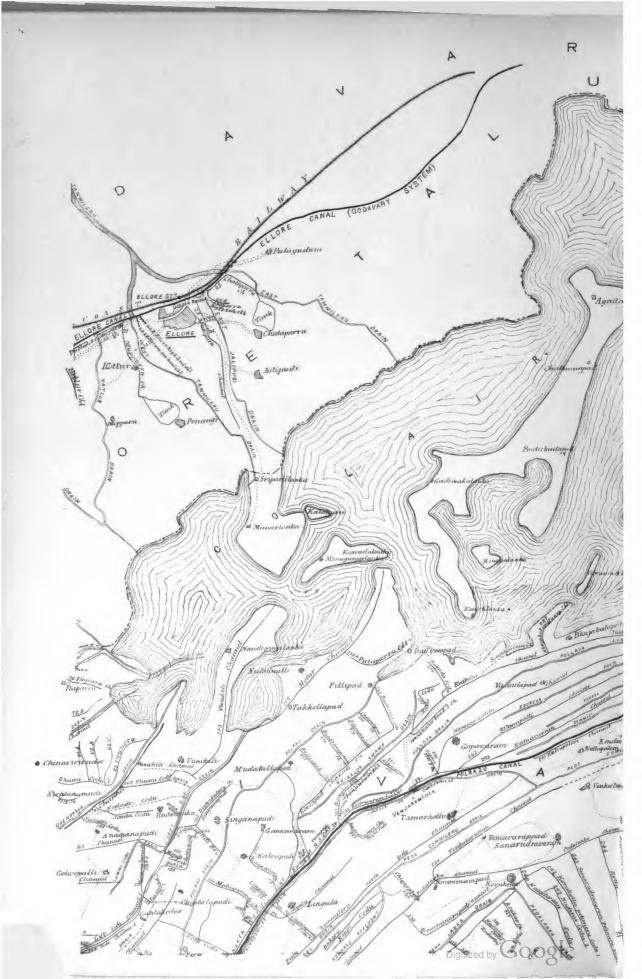
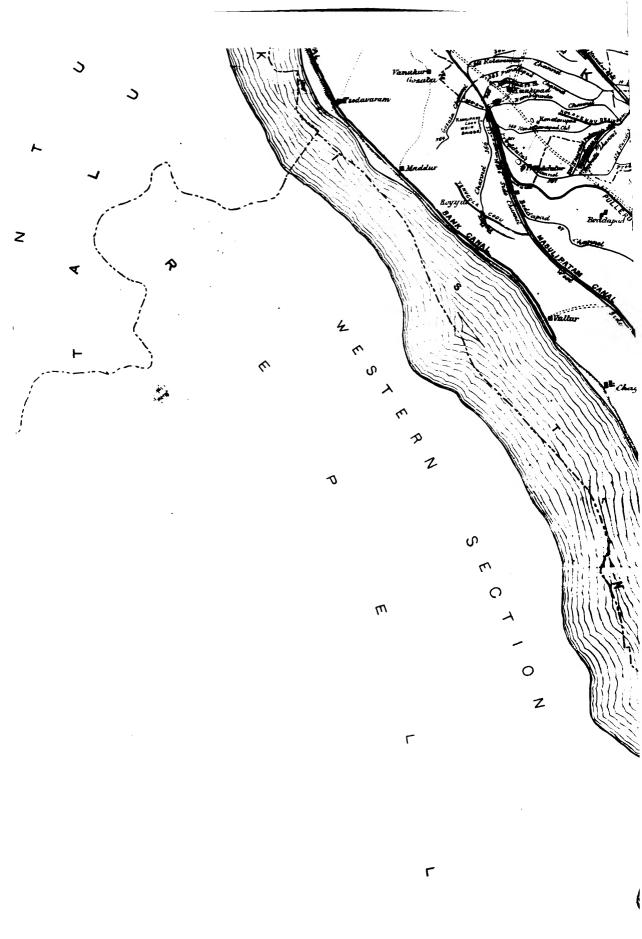
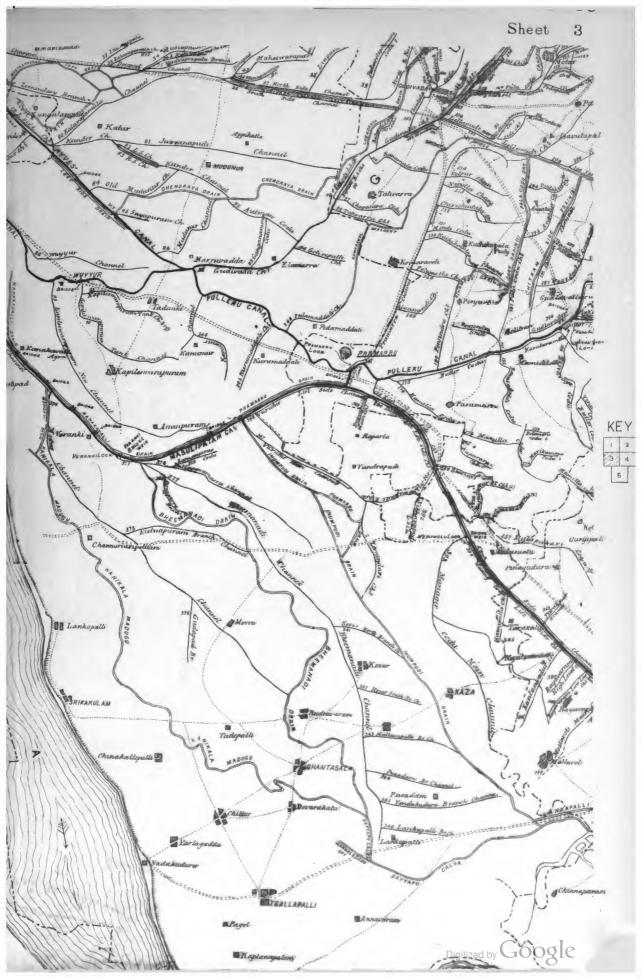
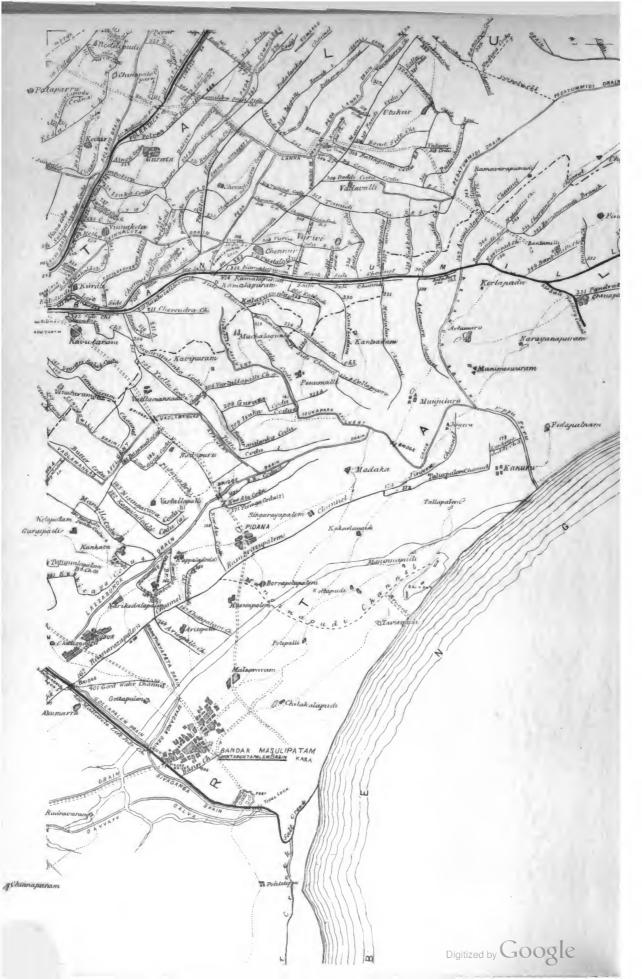
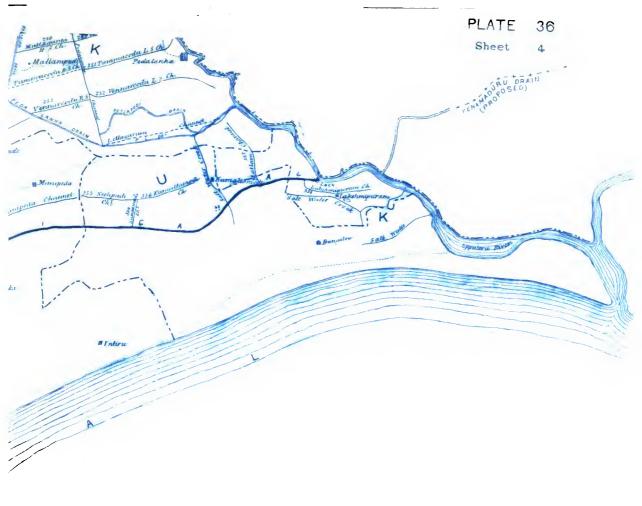


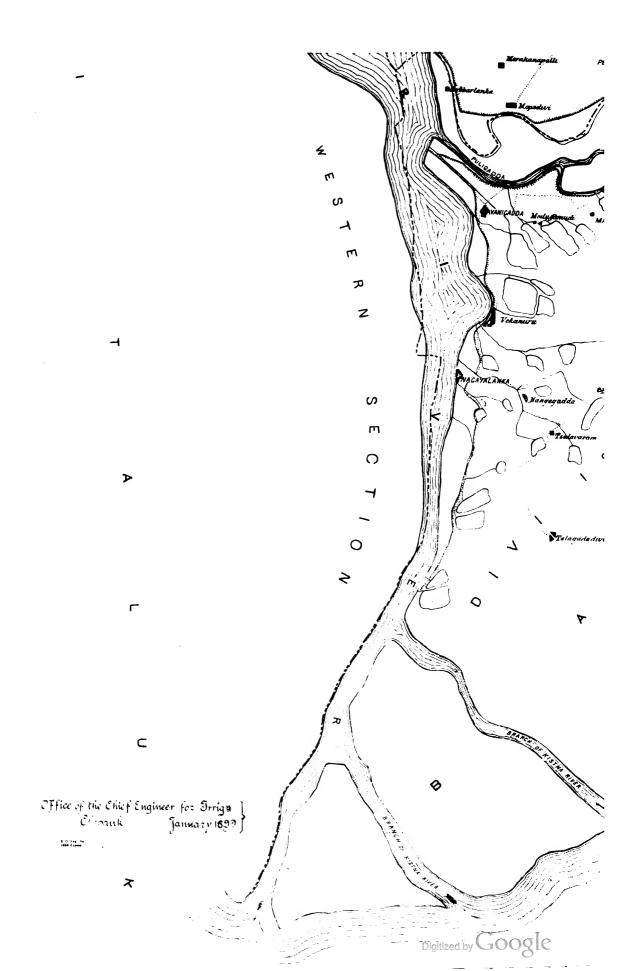
PLATE 36 Sheet **2** . K ഗ O Digitized by Google

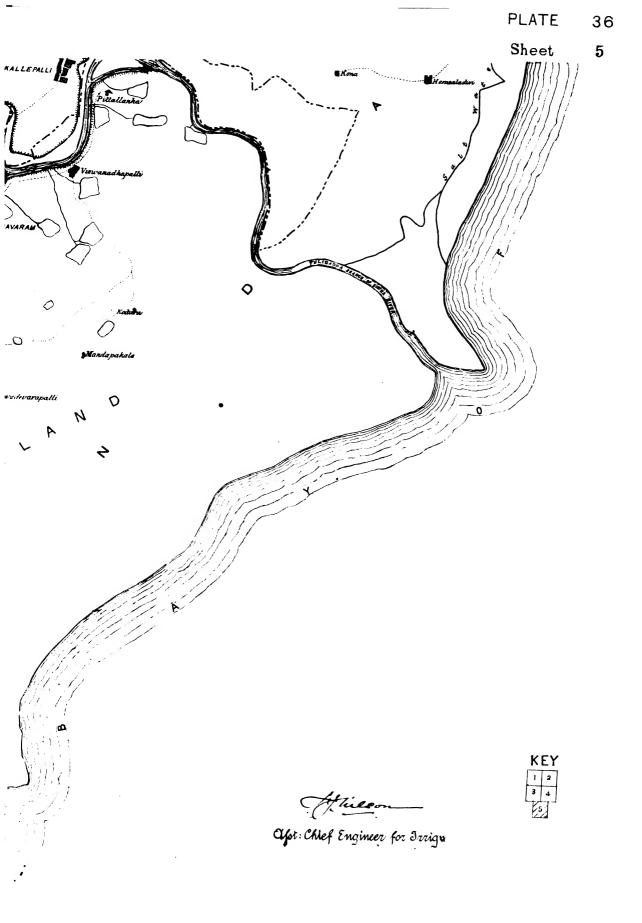


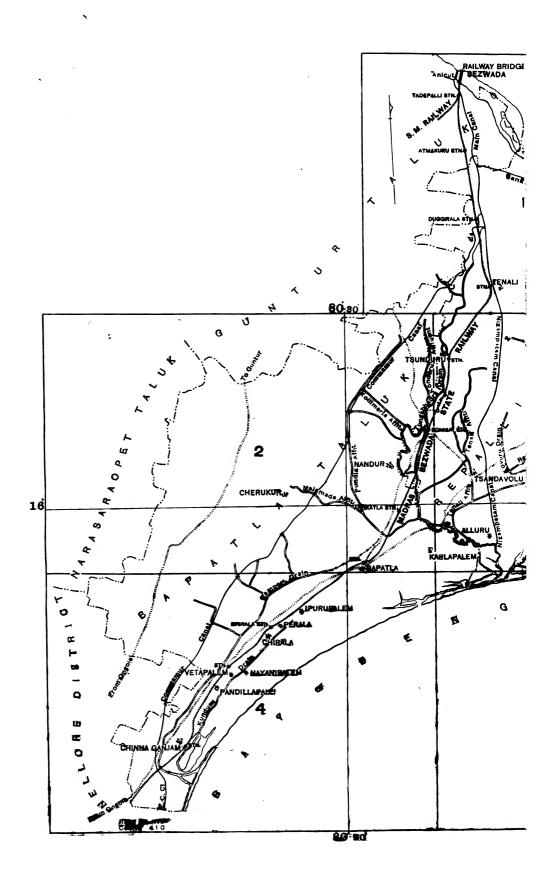












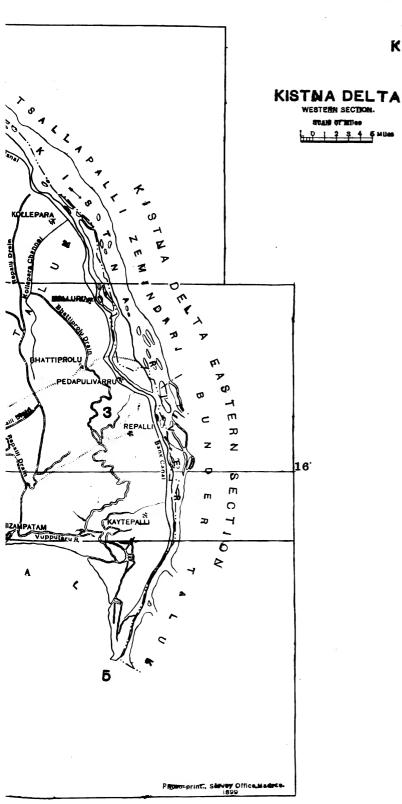
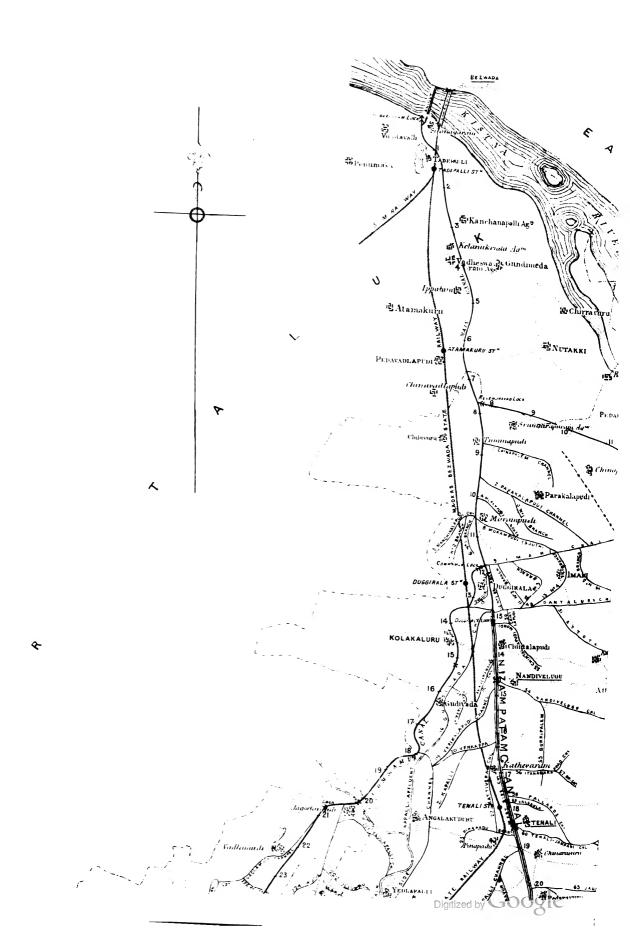


PLATE 87

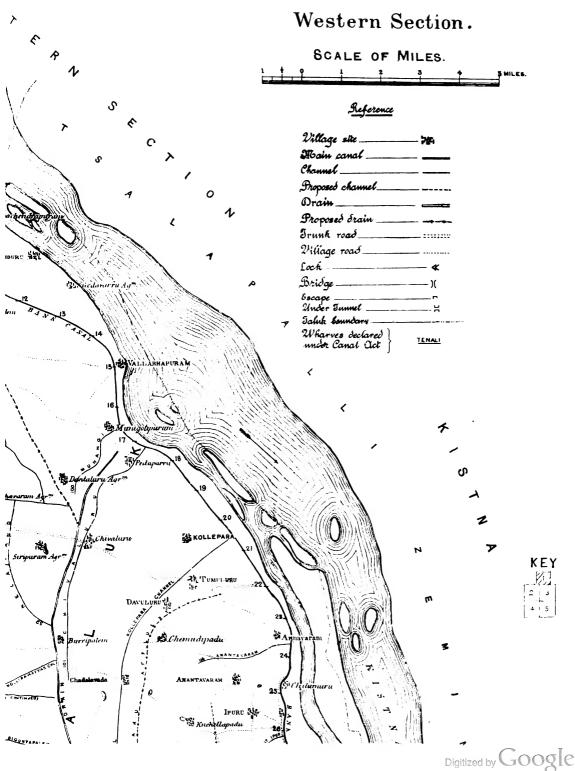


SKETCH MAP

of the

KISTNA DELTA

Western Section.

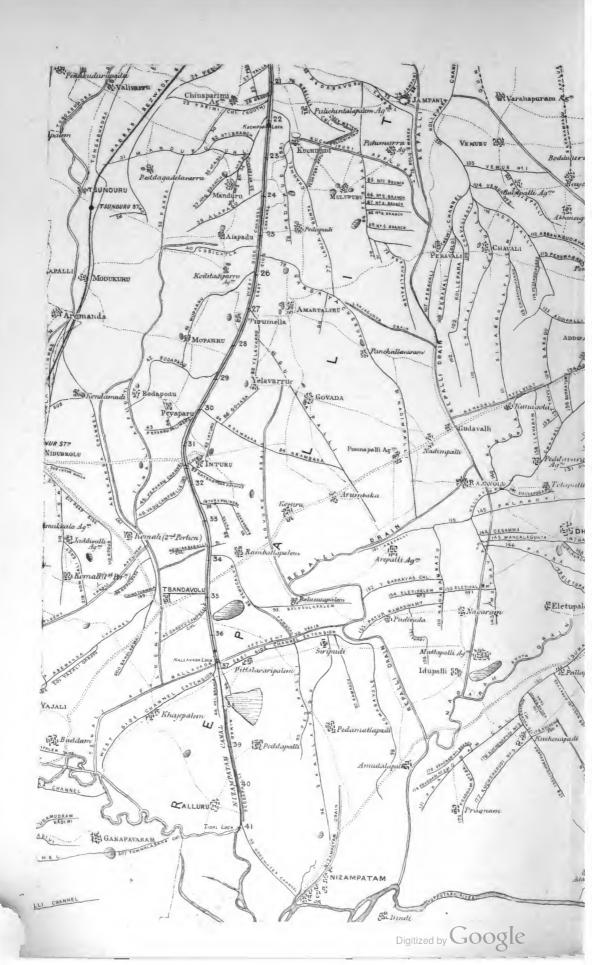


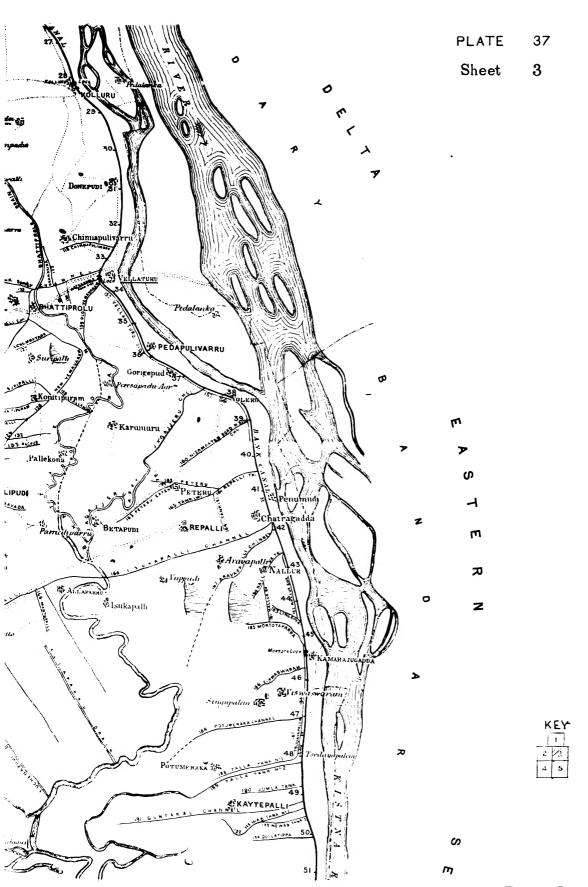


Sheet 2



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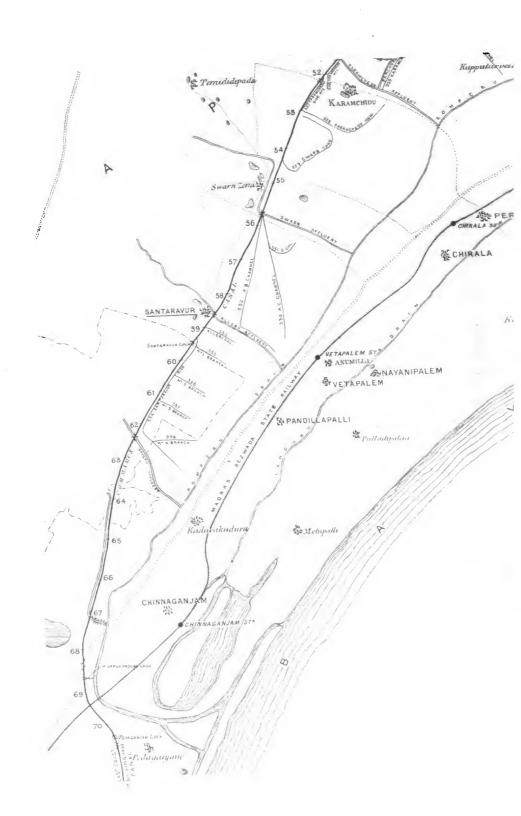
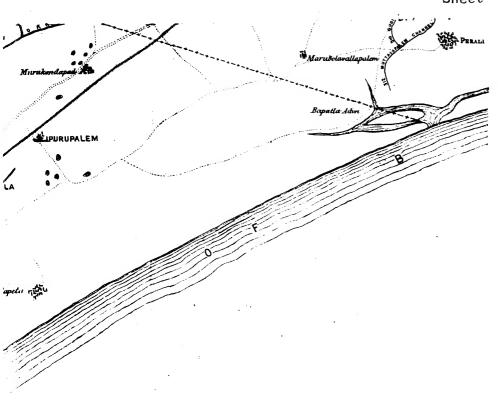
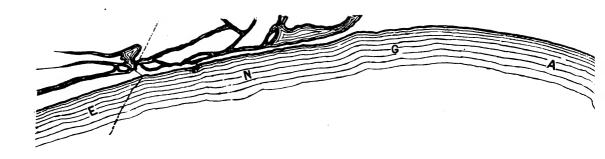
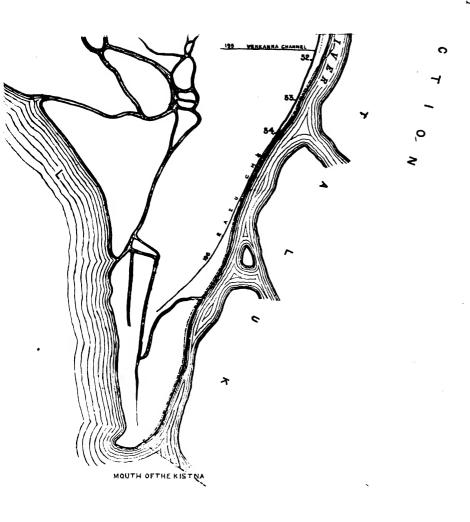


PLATE 37 Sheet 4







Cyst Chief Engineer for Inig*

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